



Living conditions: the influence on young children's health

EARLY CHILDHOOD MATTERS



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Cover: Children of the Favela Santa Marta group,
Rio de Janeiro, Brazil
The Young Child in Focus Project – CECIP,
Instituto Pereira Passos
Photo: This photograph was taken by the children of the
Favela Santa Marta themselves

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Erratum
On the Contents page in the print edition of *Early Childhood Matters* 117, Hirokazu Yoshikawa’s name was inadvertently omitted from the joint authors of the article on page 83. We apologise to the author for this omission.



There is a lack of a coordinated effort to communicate the impact of physical factors on children's health and development in an organised and holistic way. Photo • Selim Iltus

Editorial

Recognising the importance of the living conditions children grow up in

Selim Iltus, Research and Evaluation Officer,
Bernard van Leer Foundation

Introducing the articles in this edition of *Early Childhood Matters*, Selim Iltus considers why most people have yet to realise the strong link between the living conditions that children grow up in and their health and development, identifies what can be done, and touches on some angles that the Bernard van Leer Foundation is currently pursuing through its grantmaking.

The ground ... You handsome, robust country lads of the wide open spaces, who need only to step outside your doors to be close to limitless meadows, under a marvellous vast canopy of blue; you whose eyes have grown accustomed to great distances; you who are not trapped in tenements – you cannot possibly know what a vacant lot means to a city-bred child. To the child of Budapest, it is his open country, his grassland, his plains. To him, it spells freedom and boundlessness, this plot of ground that is hedged about by a rickety fence on one side, and by rearing walls stabbing skyward. By now even this ground on Paul Street has its mournful many-storied apartment house, none of whose tenants is aware that this morsel of ground once was the playground of school boys.

Ferenc Molnar, *Paul Street Boys* (1907)

When Ferenc Molnar wrote the novel *Paul Street Boys*, he fully understood the value and importance of small open spaces in the lives of the children growing up in crowded cities. Today, millions of children around the world live in environments that are likely to impair their development and threaten their health. This issue of *Early Childhood Matters* focuses on the often-ignored link between the living conditions that young children live in and their healthy development.

Inadequate physical environments are responsible for a very large number of deaths among children under the age of 5. Pneumonia causes 19% of under-5 mortality – the biggest killer of young children – and is largely associated with indoor air quality. The second-largest cause of death, diarrhoeal diseases (accounting for 17% of under-5 mortality), is associated with clean water and sanitation. To these we can add malaria and injuries, both of which are environmentally triggered

and together account for 11% of deaths among young children.

In addition to being implicated so heavily in mortality, environmental risk factors can account for slightly more than one-third of children's disease burden (Prüss-Üstün and Corvalán, 2006). Based on these estimates, it is very clear how huge positive health impacts can be achieved by improving the physical environments that children grow up in (UNICEF/World Health Organization, 2006).

Yet politicians, the general public, foundations and even most academics fail to realise the strong link between the physical conditions that children grow up in and their health and development. Why? One of the reasons is that children's well-being is usually assessed through established sectors such as education and health, and historically the professionals who work in these sectors have not been sensitised about the importance of the physical factors that influence their work.

Secondly, there seems to be no global organisation or network that specifically focuses on children's physical environments. UNESCO Habitat focuses more on youth and youth participation and only recently began to discuss issues related to children in cities. Among the hundreds of sessions held during the World Urban Forum in Rio de Janeiro in 2010, the only ones which discussed children were organised by the Child Friendly Cities project, mostly funded by the Bernard van Leer Foundation.

The third reason is the lack of a coordinated effort to communicate the impact of physical factors on children's health and development in an organised and holistic way. After selecting this subject as one of its three goals, the Foundation has tried to take the first step to close this gap. Working closely with Dutch analytical firm *De Argumentenfabriek* (The Argument Factory), we have involved the top experts in the field in developing a diagram that attempts to summarise all of the environmental factors that influence young children's lives. You will be able to find this online shortly at www.earlychildhoodmagazine.org.

What happens when communities lack basic services?

Despite the progress made in reducing mortality in young children, still the absence of basics such as clean water and clean air continues to impact the health of children globally. According to World Health Organization (WHO) statistics, almost 1 billion people lack access to improved water supply and nearly 2 million people die prematurely every year from illness attributable to indoor air pollution from household solid fuel use¹.

The article in this issue from Health Child, Uganda, (page 10) describes how the local situation dramatically affects the health of children and how community-based projects can make a difference. However, it is clear that to address the problem at the required scale, collaboration between communities and government (local and central) is absolutely necessary.

On page 14, Amny Athamny discusses the situation of children in ‘unrecognised villages’ in Negev, Israel, where Bedouin communities live. When a range of municipal services such as transport, garbage collection, electricity and sanitation are not available, residents turn to ingenious local solutions. Yet these fail to compensate for the lack of basic services, and the physical and psychological health of the children suffers.

Sudeshna Chatterjee describes the conditions of children growing up in the slums of Delhi, India (page 17), telling her story from the perspectives of the children and their everyday lives. One of the lessons that come out of this article is that when authorities intervene, in this case through slum development or rehabilitation projects, the outcomes can sometimes be unintentionally devastating for children. This happens because most development projects do not consider children, especially young children, as major stakeholders. Well-intended projects presented as slum rehabilitation can become architectural monstrosities, where families are crowded in dark, multi-storey cubicles, with no community or play space provision whatsoever.

Air quality and injuries

While the issues of water and sanitation get more attention due to their obvious impact on health, the quality of indoor air and unintended injuries are comparatively neglected in terms of coordinated research and intervention projects.

On page 24 Ruth Etzel describes how children are at risk in their homes – usually considered the safest place for them – due to polluted air from cigarette smoke and solid fuel use. Very young children in particular spend a huge portion of their daily lives in the home, and are especially vulnerable to indoor air pollution.

An often-overlooked problem of physically unsafe environments is injuries to children, which threaten their health on a large scale. Globally around 830,000 children die from injuries every year, nearly 2300 each day. More than 1000 of these children could be saved if proven injury prevention measures were applied worldwide². Mostly based on research funded by the Bernard van Leer Foundation, Martín Benavides examines factors that influence injuries to children on page 29. He defines three key factors based on this research: lack of adult supervision, presence of rubbish in the community, and domestic violence.

Importance of community-based action

It is critical to influence the thinking of design and construction professionals, the housing industry and municipalities. But many years of experience have taught us that this will be meaningless unless accompanied by well-organised community-based work. Communities are the real experts on their environments and have the ability to diagnose and propose solutions and provide action, if they have the tools and the organisational support to carry out this work.

The Foundation has initiated the development of tools that help communities to assess their environment to see how it impacts the development and health of their children. In collaboration with the Children’s Environment Research Group (CERG) and UNICEF, we developed the Child Friendly Cities Self-Assessment

Tools. These tools, designed also to be used by children, can be downloaded from the UNICEF Innocenti Research Centre website together with instructions³.

Three articles in this issue make this point clear. Alexandre Barbara Soares and Claudia Cabral (page 32) describe a process of community mapping and surveys close to Rio de Janeiro, Brazil, and show how this process

‘Yet politicians, the general public foundations and even most academics fail to realise the strong link between the living conditions that children grow up in and their health and development.’



Children experience space differently from adults, meaning that it is critical for children to have a say in the decisions that shape their outdoor environments. Photo • Selim Iltus

can lead to physical change through strengthening communities’ relationship with local authorities. A second example is provided by the article by Tim Cross (page 35). His organisation, YouthBuild International, involves young people in building and improving housing and facilities in poor communities. Their

projects have two major outcomes: while improving the physical environment through construction, they also train young people from these poor neighbourhoods to gain valuable skills that make them employable in the construction industry. The Bernard van Leer Foundation is partnering YouthBuild in Peru and Brazil.

Finally, on page 40 we interview Alexandros Tsolakis about the European Commission’s work to improve living conditions for the Roma minority in Europe. He emphasises the importance of moving past a mindset of seeing the Roma as beneficiaries of a charitable process and instead looking for ways to use the housing issue to engage Roma communities in an economic process, creating opportunities for families to participate in the mainstream economy.

The link between the physical environment and healthy development

On page 44, Pia Björklid and Maria Nordström elaborate on the importance of children’s access to public spaces and natural environments. Approaching the issue from a developmental perspective, they show that children experience space differently from adults, meaning that it is critical for children to have a say in the decisions that shape their outdoor environments. The authors stress the importance of children’s independent mobility, which is continually shrinking for reasons including increased vehicle traffic and parental attitudes.

Louise Chawla points to the critical relationship between healthy development and access to nature and why this is especially critical for the health and development of young children (page 48). She makes the practical point that even very small natural places with trees, grass, water and soil can have a major impact. This is an important lesson for the Foundation and its partners who work in crowded and fully built-up settings such as the slums of India and the *favelas* of Brazil.

What can be done?

We believe that much can be done in this area. Anyone who travels extensively in low- and middle-income countries can easily see that the majority of the world

looks like a huge construction site. Global construction spending is expected to reach \$4.6 trillion by 2015⁴, and this figure probably does not include the self-built housing that is standard in many developing countries.

It is important to consider how development and construction projects (such as housing or infrastructure development) will affect the lives of children, especially young children, who – due to their dependence on adults and limited mobility – have no opportunity to rearrange their everyday environments. The Bernard van Leer Foundation promotes the concept of ‘child impact statements’, quick studies similar to ‘environmental impact studies’, to help professionals in the fields of planning, architecture and construction to be aware of the impacts of their decisions on the lives of children.

Housing is one of the most critical areas to focus on, since young children spend most of their time in or around the house. A global debate on what constitutes a child-friendly house needs to take place at multiple levels, and this can be encouraged through design competitions, conferences and social media. Even simple-looking decisions can have significant impacts – for example, the orientation of the kitchen can affect a parent’s ability to supervise children while cooking. This is why designers need to learn to listen to the people they are designing for.

Such a result can be realised by communities actively participating in building and upgrading their environment, through participatory research and evaluation. Involving children in collecting data on their community is a very effective way to reveal concepts that are critical for their health and development. Studies show that children are very reliable researchers, especially when their own environment is being considered, sometimes revealing knowledge that surpasses that of adults because, through play, they explore their community in ways that adults cannot. While preparing plans for quick evacuation following the tsunami in Indonesia, for example, it was determined that the children were more able than adults to identify the shortest and safest routes of escape. The

Foundation is currently working with children’s groups in Iquitos, Peru, where children are actively involved in researching their communities and reporting their findings.

By focusing on the importance of living conditions on young children’s health, the Bernard van Leer Foundation intends to expand the debate on this issue, to increase definitive research in this area and to engage key players and funders to give more attention to physical environments. This will happen if these parties start to see poor physical environments as a root cause for many of the issues they are trying to address, such as child health and development.

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Notes
1 WHO statistics on water sanitation and health are published at: http://www.who.int/water_sanitation_health/facts_figures/en/index.html
2 The WHO Fact File on injuries to children is available at: http://www.who.int/features/factfiles/injuries_children/en/index.html
3 The Child Friendly Cities toolkit is available at: <http://www.childfriendlycities.org/en/research/final-toolkit>
4 According to a research report *Construction Industry: A Global Outlook* announced by Global Industry Analysts, Inc. in February 2012, see: <http://www.constructionbusinessowner.com/topics/global-construction-spending-reach-46-trillion-2015>

Working meaningfully with communities to improve children’s physical environments in Uganda

Betty N. Walakira, Executive Director, and Nalule Sarah, Project Coordinator, Health Child, Kampala, Uganda

Uganda is one of the least developed and most impoverished countries in the world. Despite a positive policy framework, there remains much to be done in promoting the health of young children through safeguarding their physical environments. This article surveys the overall situation in Uganda, and shares one project’s experience in improving children’s environments in a fishing village in Eastern Uganda.

Decent housing, safe water and sanitation, protection from indoor and outdoor pollution, and quality of space for play are all critical aspects in young children’s physical environments (Bartlett, 2002). In theory, Uganda has a positive policy framework to safeguard young children’s living conditions. It has a national housing policy with a goal of well-integrated, sustainable settlements with adequate shelter, secure tenure and basic infrastructural services.

Uganda also possesses a national shelter strategy (Government of Uganda, 1992) to guide housing development, and subscribes to General Comment 4 of the United Nations Committee on Economic, Social and Cultural Rights (CESCR, 1991) on the right to adequate housing, which refers among other things to availability of services, habitability, affordability, accessibility, location and cultural adequacy.

However, even in theory the importance of the relationship between housing and its particular relevance to the situation of children is not strongly acknowledged. And in practice, these housing policies have failed to positively impact on housing development. Many households in Uganda do not have access to secure housing or to services such as water, sanitation, drainage and waste disposal. This has direct effects on children’s physical safety (Jack, no date).

Around half of Uganda’s 30.7 million population is aged under 15 years (Uganda Bureau of Statistics, 2010). An estimated 85% live in rural areas, where sanitation coverage is very low. Generally, living conditions in rural areas in Uganda are characterised by leaky houses,

cracked walls, vermin infestation and dependence on biomass fuels for cooking, resulting in indoor and outdoor air pollution. In urban areas, 60% of residents live in congested slums characterised by poor sanitation and drainage, leading to a high incidence of disease and frequent epidemics.

Respiratory infections and diarrhoeal diseases

The latest Uganda Health Demographic survey, conducted in 2006, revealed that 15% of children aged under 5 years had symptoms of acute respiratory infections in the 2 weeks preceding the study (Uganda Bureau of Statistics, 2007). Children living in households that burn wood or straw for cooking were more likely to be affected than those living in households that use charcoal. Young children’s proximity to their mothers as they cook increases their exposure to respiratory illnesses, as well as their risk of accidents.

Meanwhile, 26% of children under age 5 had diarrhoea at some time in the 2 weeks preceding the survey, and 6% had dysentery. This problem has highly compromised the health situation of young children in Uganda, as shown by infant and child mortality rates currently standing at 75 and 137 deaths per 1000 live births respectively. According to the World Health Organization (WHO), diarrhoeal diseases are responsible for 17% of all deaths of children under 5. The prevalence of such diseases can be traced to poor sanitation and lack of clean water, and in its National Development Plan covering the period 2010/11 to 2014/15, the Government of Uganda set out targets for 2015 in these areas including:

- 77% of the population in rural areas and 100% of the population in urban areas to have access to improved water sources and improved sanitation
- Pupil-to-latrine ratio to be reduced to 40:1
- More than 50% of households to have hand washing facilities.

However, the Ministry of Water and Environment’s 2011 performance report shows how much is left to achieve. Access to safe water and sanitation among rural households has stagnated at 65%, while in urban

‘Generally, living conditions in rural areas in Uganda are characterised by leaky houses, cracked walls, vermin infestation and dependence on biomass fuels for cooking, resulting in indoor and outdoor air pollution.’



Health Child has had considerable success with a project to improve the physical environment of young children aged 0–8 years in poor fishing communities in Eastern Uganda. Photo • Courtesy Health Child

households it has actually reduced since the previous report, from 67% to 66%. Access to improved sanitation in the rural households stands at 70% while in the urban areas it has increased to 81%. The pupil to latrine ratio in primary schools has worsened, from 54:1 to 66:1 (Ministry of Water and Environment, 2011). Countrywide, only 23% of households have access to hand washing facilities at the latrine (Government of Uganda, 2010).

The major challenges to progress in improving children's health through improving their environments are inadequate government funding – in the financial year 2010/11, the overall budget for the water and environment sector was just 3.1% of the total national budget of UGX 8.37 trillion – along with inadequate capacity of local governments to deliver services. Lack of coordination between sectors also stands in the way of realising the Government of Uganda's 2007 national policy on early childhood development, which is intended to holistically address the needs of children aged 0–8 years (Government of Uganda, 2007).

Health Child's work in Kisima I

As an example of what can be achieved through a holistic approach rooted in strengthening communities, the organisation Health Child has had considerable success with a project to improve the physical environment of young children aged 0–8 years in poor fishing communities in Eastern Uganda. The project closely collaborates with caregivers, local leaders, community members, religious institutions, community health volunteers, health centres, district and non-governmental organisations to bring about meaningful change in the lives of young children.

The important role of the community in improving hygiene and sanitation is clearly illustrated by the island village of Kisima I, which has an estimated population of 1500 people drawn from 10 tribes from across Uganda and neighbouring Sudan, Congo and Kenya. Health problems were common in Kisima I due to practices including open defecation, use of the lake to wash utensils, bathe and for drinking water, and lack of basic household sanitation facilities. However, community

members tended to attribute these problems to cultural practices of other tribes, and so the community split themselves into five culturally oriented zones.

Community consultations during the inception phase of Health Child's project in 2009 drew attention to the prevalence of malaria and diarrhoea, and children playing in the lake and along its shores without proper supervision as caregivers were engaged in fishing-related activities. Health Child mobilised the community to select community health volunteers and formulate bylaws on sanitation and hygiene together with the village local leaders. The laws were printed on a public billboard by the island's major boat dock, so no one can miss them – a successful strategy since replicated in four more local villages. Local leaders have continued to emphasise household adherence to the laws during monthly home visits, community meetings and community sensitisation activities, and Health Child has worked with them to strengthen their communication skills.

'An especially effective part of the intervention has been working with siblings of the children in the ECD centres.'

As a result, the community has succeeded in tremendously improving sanitation coverage, using locally available materials in the construction of sanitation facilities: 91% of households have bath shelters, 84% have utensil drying racks and 86% have access to a pit latrine. There has also been a great reduction in littering of compounds, open defecation and lake bathing. With external support, the community constructed water tanks annexed to an early childhood development centre.

Safe spaces and work with siblings

A further part of the project, Health Child worked with caregivers to identify safe public areas which community members have designated and developed as play areas

for young children. This process was informed by practical mapping exercises with children, who used pictures and dialogue to identify hazardous items in their communities and items they wanted to see in safe spaces – these included trees, grass, flowers and play items such as sandpits, ropes, toys and swings. While in the safe spaces, children are engaged in guided play by community-selected resource persons who aim to improve their cognitive, physical and social development.

An especially effective part of the intervention has been working with siblings of the children in the ECD centres through a programme called *mujje tuyige wamu* ('come let us learn together'). Dialogue meetings were held with caregivers and teachers in seven primary schools to develop a life skills programme for primary school children. As well as imparting knowledge on such issues as their rights and preventing early pregnancies, the primary children were creatively engaged in making learning and play materials including models, manila paper for writing, painting, making mosaic drawings, cutting and pasting pictures of animals, plants, insects, and making dolls, ropes and balls from locally available materials such as old clothes, banana fibres and polythene bags. The play items are then utilised by the young children during play activities in the safe spaces.

The programme was also effective in mobilising communities to tackle an outbreak of jiggers (*Tunga penetrans*, a parasitic flea) in Eastern Uganda in 2009, which highly affected especially primary-aged children (African Network for the Prevention and Protection against Child Abuse and Neglect (ANPPCAN) Uganda Chapter, 2010). Health Child partnered with local government to provide services including fumigation, home visits by health volunteers and counselling. Amid the successes of the project, however, there remains a question mark over sustainability, especially given the high mobility of the village's inhabitants.



Caregivers identified safe public areas which community members have designated and developed as play areas for young children. Photo • Courtesy CORDAID, The Netherlands

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How physical conditions in Israel’s unrecognised villages affect children’s health

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Thousands of young children are growing up in ‘unrecognised villages’ in Arab Bedouin communities in the south of Israel. This article explores what ‘unrecognised’ status means, and its implications for the health of young children.

Young children growing up in ‘unrecognised villages’ among the Arab Bedouin community in the south of Israel face risks to their health. This fact is acknowledged in a research report for the Israeli Knesset (Parliament) in 2011:

Rates of hospitalization for infectious diseases are higher among Arab-Bedouin children compared to Jewish children in the south of Israel for gastrointestinal infectious diseases, diseases that are influenced by living conditions. The report is based in part on a study published in 1998 which identified a significant increase in intestinal infections and diarrhoea in Arab-Bedouin children during the summer months.

The report points out that such infections are found mainly in developing countries, starkly illustrating the impact of living in an ‘unrecognised village’ even in a relatively high-income country.

So what does it mean in practice for villages to be ‘unrecognised’ by the public authorities? Although the rest of the country has effective water, sewerage and electricity networks, unrecognised villages are not connected to any of them. The paved road network does not extend to unrecognised villages. Garbage collectors do not visit unrecognised villages. For public authorities and public services, unrecognised villages are effectively not on the map – although, in reality, many have been in existence for hundreds of years.

According to estimates made by the Regional Council of Unrecognized Villages in 2006, the population of unrecognised villages is around 48,430 (Regional Council of Unrecognized Villages, 2006). A further 32,200 live in ‘under-recognised’ villages where conditions are somewhat better, and 134,000 members of south Israel’s Arab Bedouin community live in recognised villages, according to the National Insurance Institute of Israel¹.

Most residents of the unrecognised villages live in shacks or tents, whereas residents of recognised villages mostly have stone houses (Al-Krenawi, 2004).

Living in an unrecognised village also brings the constant threat of having one’s home demolished. Over the last 5 years, an average of around 60 homes per year have been demolished². This has a tremendous impact on children’s mental state. As a psychiatrist involved with Physicians for Human Rights (PHR) explains:

For children, it is not only a physical place to live which is destroyed, but also their innate trust in their parents’ ability to protect them and in their family as a safe haven. Undermining this trust can lead to a wide range of psychopathologies such as personality disorders, depression, behavioural problems, social avoidance, learning problems and addictions.

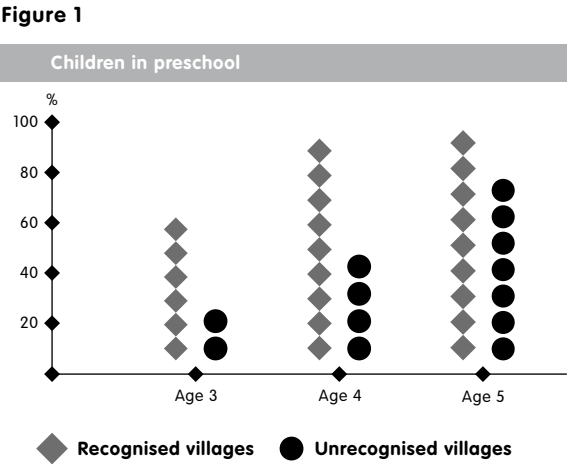
Unrecognised status brings a lack of protection from the planning system. Often, the construction of industrial areas, railways and power plants is allowed near unrecognised villages. A study into the health of residents found a correlation between rates of hospitalisation due to respiratory illness and proximity to the heavy industrial zone of Ramat Hovav³.

Rivers pose another major environmental hazard: raw sewage from Kiryat Arba and Hebron villages flows into the Hebron river and on through the large village of Um Batin, and inadequately treated wastewater is pumped into the Dimona river.

The lack of adequate transport infrastructure in unrecognised villages means that many children find it difficult to travel the distance required to attend school. As shown in Figure 1, the percentage of children, especially the younger ones, engaged in any type of schooling is much lower in unrecognised than in recognised villages.



A child improvising a playground for the younger children.
Photo • Courtesy NISPED-AJEEC Tent

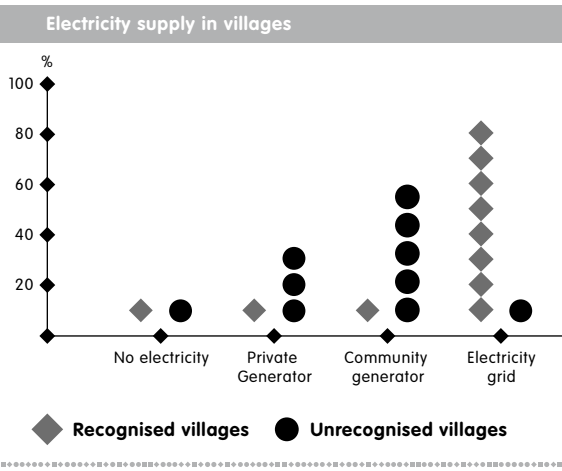


Source: Ben-Rabi *et al.*, 2009

Health hazards from lack of public utilities

Lacking connection to the national electricity network, most people living in the unrecognised villages rely on either community or household generators, as shown in Figure 2. The reliance on generators not only means more local pollution, it also means that the electricity supply is more costly and more prone to interruptions and failure. This makes it more difficult keep houses sufficiently cool in summer and warm in winter, and to refrigerate medicines effectively.

Figure 2



Source: Al-Krenawi, 2004

The absence of organised garbage collection also poses a threat to children’s health, given that the community disposes of waste either by burning it in pits near residential areas or by dumping it. This results in pollution of water and land, on top of the safety hazards for children which arise from the waste itself – for example, medical waste including residues of drugs. When researchers asked mothers of children in unrecognised villages about the environmental hazards affecting their children, garbage was the most popular concern, mentioned by 88% of mothers (Ben-Rabi *et al.*, 2009).

Finally, clean water and sewage disposal present major problems for residents of unrecognised villages. They store water in plastic or metal containers which, twice a week, are dragged by a tractor to filling points that may

be several miles away. The combined cost of the water itself and the use of the tractor is high, which means that an average family consumes only 3.5 m³ of water per week.⁴

Almost no homes in unrecognised villages, meanwhile, are connected to the sewage system. Two-thirds of inhabitants of unrecognised villages (compared to one-quarter of those in recognised villages) rely on pit latrines, while almost one-third (compared to only 4% in recognised villages) lack even these facilities (Al-Krenawi, 2004).

Considering all these factors, it is perhaps not surprising that growing up in unrecognised villages has the effects on young children’s health discussed in the research report referenced at the beginning of this article (Research and Information Unit of the Knesset, 2011). The Bernard van Leer Foundation is working in a number of ways to tackle this situation in unrecognised as well as recognised villages, including a project implemented by NISPED-AJEEC (the Arab-Jewish Center for Equality, Empowerment and Cooperation of the Negev Institute for Strategies of Peace and Development) to install solar panels for powering refrigeration units; looking into how the hospital in Beer Sheva can help families to deal with health problems in their home environment; and approaching bus companies to put up adequate lines and bus stops.

Notes
1 Information from the National Insurance Institute of Israel at: <http://www.btl.gov.il/Mediniyut/Situation/statistics/BtlStatistics.aspx>
2 Data from the website of the Negev Coexistence Forum for Civil Equality (DuKuim): <http://www.dukium.org/eng/>
3 Data from a report for the Israeli Knesset (Parliament) in 2011, based on research conducted in 2009.
4 Data from a research report for the Israeli Knesset in 2011, based on a 2003 report by PHR.

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Children growing up in Indian slums
Challenges and opportunities for new urban imaginations

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The physical environments of slums present many challenges to residents, particularly children. Even so, there are thriving communities in slums with strong social and economic networks. This article looks at the reality of growing up in slums in Delhi, and explores how well-intentioned slum improvement efforts can fail children. It concludes by identifying ways in which India’s policy environment could support efforts to make slum improvement programmes more child-friendly.

Children growing up in slums experience a childhood that often defies the imagination of both the ‘innocent childhood’ proponents and the ‘universal childhood’ advocates. The slums typically lack proper sanitation, safe drinking water, or systematic garbage collection; there is usually a severe shortage of space inside the houses where the children live, and no public spaces dedicated to their use. But that does not mean that these children have no childhood, only a different kind of childhood that sees them playing on rough, uneven ground, taking on multiple roles in everyday life, and sharing responsibilities with adults in domestic and public spaces in the community.

Some years ago I spent a year working closely with and observing children in Nizamuddin Basti, an 800-year-old historic settlement in the heart of central New Delhi best known for its famous Sufi shrine, the Nizamuddin Dargah. This internationally renowned spiritual centre is also a prominent cultural and philanthropic institution for the community and the city. The Basti is now considered an urban village with a historic core and layers of slums on its periphery. A predominantly Muslim community, Nizamuddin Basti and its slums together comprise ten notional precincts. These precincts were first delineated by children who worked with the local NGO, the Hope Project, in a community mapping exercise; the NGO is using the map to develop strategies for the different precincts of the Basti, given the different profiles of their residents (long-term residents vs. new migrants, regional origin, language and customs, and professions).

Children were to be seen everywhere as one entered the Basti. They played in the parks that wrapped the Basti on the western side to hide it from the gaze of the city. They played on the rough ground and vacant lots dotted with graves, in the open spaces in the centre where garbage was manually sorted. The parked rickshaws, vending carts, cars and bikes all served as play props in the streets. As soon as they could walk, children could be seen outdoors walking around mostly barefoot, climbing on debris and petting goats that freely roamed around. Girls as young as 5 carried infants and toddlers on their hip and moved around freely in the narrow pedestrian bylanes of the village, visiting shops for sweets and the houses of friends down the street. Many houses open out directly onto the street through a doorway that often is nothing more than a 5-foot-high opening in a wall. Infants reach out of these holes in the wall and interact with passers-by.

The Basti has an approximate population of 15,000, based on the counting done by the Hope Project 3 years ago. Since a major focus of the Hope Project’s admirable work was on health and education, I looked up the data on child health as recorded in the outpatient registers of the paediatric unit. Just over 5000 children aged under 14 years live in the Basti. For common ailments the majority of households visit the Hope Dispensary, with the next most commonly visited medical facilities being private doctors and government hospitals and dispensaries (Prerana, 2007). The most common childhood diseases reported at the Hope Project are respiratory diseases, diarrhoea, gastritis, intestinal worms, anaemia, scabies, and ringworm. An adverse living environment characterised by overcrowding, lack of ventilation in homes, and inadequate sanitation, water supply and water storage facilities no doubt contributes to the childhood diseases reported.

However, despite a largely unplanned physical environment, with debris and garbage generously strewn around, very few serious injuries occur in the public domain. Only a few superficial cuts were reported. I too had noticed that during my year-long observation in the Basti. In fact, the only accident I

witnessed involved play equipment provided by the government in front of the municipal school.

The stories of Rani and Wahida

Rani's family lived in one of the peripheral slums of the Basti called Nizam Nagar, one of the most deprived precincts and also the most crowded. The average monthly income of a family there barely exceeds 30 euros. Spread over about an acre, this informal housing accommodates 4458 people. Rani lived with her mother, two unmarried sisters and a married sister and her family in their two rooms arranged one on top of the other. The married sister occupied the top room. Half of the bottom room was occupied by a bed and the remaining floor space at the back was used for cooking, storage and for sitting around. The room had windowless walls on three sides and only opened onto the street in front. Rani's mother had carved out a small shop selling cigarettes in the front of the room. There was no attached toilet or any piped water supply in this house.

When she was 11 years old, Rani kept a journal for me for a week, recording her day before she went to sleep. This account of her life provides some valuable glimpses about the multiple roles a girl child plays in this community. Rani was responsible for fetching milk for tea for her family every morning from Hasan Bhai's tea stall. She would meet and chat with friends and neighbours here. In poor families such as hers, food is purchased on a daily basis, as there are no refrigerators for storing groceries.

Rani was a good practising Muslim. She washed herself in the morning and routinely offered all five prayers, or *namaz*, throughout the day. She called on her friend Meher, who lived around the corner, every morning and walked with her to the Hope Project's non-formal school for adolescent girls. Rani performed daily household chores and shopping for the family, fetching cigarettes, snacks and groceries both for her mother's shop and for home. Rani acted as guardian to her little niece, playing with her, feeding her, looking after her. She was a part-time shopkeeper, and sat in their small house-front shop to relieve her mother of her shopkeeping duties for some time every day.

Rani was a good student; other girls came to her for homework help. She bought sweets with small change, liked to play with domestic pets and with friends in the street in front of her house, in the nearby open spaces including the yard of the public toilet across from her house, in Meher's back yard, and in the city park that was just outside the wall that separated her street from the park. Rani's two older unmarried sisters took care of the cooking, cleaning and washing.

Rani had a friend called Wahida – unlike her, an orphan who had grown up in many households. Wahida split her time between the houses of her older siblings, her grandmother and her friend Rani's family in Nizam Nagar. Her days were filled with household chores, besides attending the non-formal Hope school and evening religious studies. Wahida also attended a vocational training course in tailoring and sewing every afternoon in the community centre across from Nizam Nagar.

Both Rani and Wahida had grown up in severe poverty. Rani's father had died of a drug overdose after reducing the family to penury. Rani's mother barely earned a dollar a day from her shop and found it difficult to pay even the two rupees that would have bought Rani a hot lunch at school. Wahida had no one to watch over her and depended on charity for meals and a roof for the night. Yet both girls not only survived but thrived in this slum which represents one of the best examples of social capital in an urban neighbourhood. Seven years later, Rani and Wahida have both successfully completed school and are undergoing training as nursery teachers. Wahida is also working as an assistant to a city physiotherapist.

'Children growing up in slums experience a childhood that often defies the imagination of both the "innocent childhood" proponents and the "universal childhood" advocates.'



Children use the public realm of neighbourhoods not only for playing but for many other activities including privacy needs and concealing secrets. Photo • Courtesy Sudeshna Chatterjee

Slum redevelopment with children in mind

There are many such stories in Nizamuddin Basti that speak to the power of family and community social capital in aiding the well-being and future prospects of children. The many everyday places in Nizam Nagar and the larger Nizamuddin Basti that allow children like Rani and Wahida to be active social participants in everyday life are the stuff that communities are made of.

When families are driven out of their slums and taken by truckloads to a resettlement site, they are not only driven away from their homes but also from their communities. Sadly, this is the reality of how many cities are tackling slum renewal – notably Delhi, where families living in squatter settlements are routinely

displaced from their squatter locations to make way for profitable new developments and are relocated to barren resettlement sites typically outside the city. Delhi has 44 such resettlement colonies, with a total population estimated to be 1.8 million (Government of Delhi, 2002). Less than 1% of the land occupied by squatters is privately owned (Kundu, 2004), implying that if there were political will, the state could easily provide adequate housing with secure tenure inside the city.

Most slum redevelopment assumes that overall slum improvement processes will automatically benefit children. This is unfortunately not always true. Even the best of initiatives that work on improving sanitation – such as through providing more public toilets, as is currently happening in Nizamuddin Basti – do not take children’s needs into account. Public toilets are scary places for children and with long adult queues, children have to wait a long time for their turn. These are reasons why children can often be seen to squat in the space outside the toilet block or in the street right outside their homes.

The new toilet blocks were part of a larger improvement plan in the Basti that did not adequately consider children. For example, the Basti improvement plan ostensibly benefited children by creating two new landscaped parks. One of them was exclusively for women and children, although it opened its secure gates for only a few hours in the evenings. (Recently a local NGO negotiated access at least once a week outside of the evening hours for children who are part of their programmes.) The other new park replaced a large, central open space in the heart of the community,

which was used for sorting scrap. As most residents in the peripheral slums of the Basti depend on this business for a livelihood, the unavailability of this space meant sorting scrap at home. As a result, the home environment is now extremely hazardous for children. These kinds of problems result when communities are not made partners in development, and solutions instead come from a myopic outside view.

In Khirkee, another urban village in Delhi south of the Nizamuddin Basti, children living in a small slum cluster in neighbouring Panchshel Vihar had access to only one badly maintained park, even though the local area had several landscaped parks. When I asked 12-year-old Rinki, who was a play leader of the slum children, what sort of improvements she would recommend for the park, she told me, ‘Please don’t do anything otherwise we will not be able to play here any more.’ This poignantly sums up the attitude of the city. While in theory investment in parks is seen as benefiting children, in practice the temptation is to protect the newly beautified parks from slum kids, who are viewed as vandals. In some communities, slum children are actively evicted from parks, which defeats the purpose of providing them. Rules on park use also discourage imaginative play – when we observed children in landscaped, rule-bound parks that kept out slum children, we counted them playing 12 to 16 different games. In contrast, the slum children from Panchsheel Vihar were counted playing 34 different games in the badly maintained park in Khirkee.

Children use the public realm of neighbourhoods not only for playing but for many other activities including privacy needs and concealing secrets. This requires a range of spaces of different scales and character. Well-designed parks are no doubt very desirable for slum kids, but throughout the day more play happens in the streets and informal open spaces of the neighbourhood than in formal parks. Children in both Nizamuddin Basti and Khirkee referred to the importance of having friendly adults around their play territories, which tells us we need to create new, more imaginative solutions for children’s play than resource-intensive parks which inevitably become sites of conflict between different user groups.

‘While in theory investment in parks is seen as benefiting children, in practice the temptation is to protect the newly beautified parks from slum kids.’



As the well-being of children is closely connected to the quality of physical living environments and to the delivery of and access to services, children must be central to slum improvement programmes.
Photo • Courtesy Sudeshna Chatterjee

Children from both communities routinely sought out open spaces in the local area outside their neighbourhoods. This points to the importance of integrating slums with the wider local area and securing access to open-space resources for slum children outside of the slum. The importance of community-level open spaces for children living in slums cannot be overemphasised. As there is little opportunity for innovation within the 12.5 m² of cramped private domestic space that Delhi slum dwellers are typically allocated, children in slums, including very small children, spend a large portion of their day outdoors. The cleanliness, safety and friendliness of the outdoor spaces

in a slum thus play an important role in the health and well-being of children. Slum improvement plans will work better for children if we consider environmental improvements to the slum neighbourhood as a whole by involving children and by considering slums to be an integral part of the city.

The policy environment in India

India deals with slums only through poverty alleviation strategies. Since the 1980s, every Five Year Plan has included strategies targeting the environmental improvement of urban slums through provision of basic services including water supply, sanitation, night shelters and employment opportunities. But as urban slum growth is outpacing urban growth by a wide margin (UNDP, 2007), the living conditions of more than a 100 million urban slum dwellers in India remain vulnerable.

Is it possible to create a new imagination of slum development within the current policy environment of India? Following the liberalisation of India’s economy in 1991, two landmark events unfolded which may enable this:

- 1 the 74th Constitutional Amendment of 1992, which proposes that urban local bodies (ULBs) should have a direct stake in urban poverty alleviation and slum improvement and upgrading, with participation of citizens, and
- 2 the Jawaharlal Nehru National Urban Renewal Mission (JNNURM), launched in December 2005, which embodies the principles of the 74th Constitutional Amendment. JNNURM outlines a vision for improving quality of life in cities and promoting inclusive growth, through substantial central financial assistance to cities for infrastructure and capacity development for improved governance and slum development through Basic Services to the Urban Poor. These include security of tenure at affordable prices, improved housing, water supply, sanitation, education, health and social security.

In promoting an integrated approach to planned urban development and the provision of basic services to the

urban poor, JNNURM can perhaps reduce some of the existing lapses in planning and service delivery and improve living conditions for the urban poor in a fairer manner. The Ministry of Housing and Urban Poverty Alleviation has recently launched the National Urban Poverty Reduction Strategy (2010–2020): ‘A New Deal for the Urban Poor – Slum Free Cities’, which adopts a multi-pronged approach to reducing urban poverty involving measures such as slum renewal and redevelopment (Mathur, 2009). This calls for developing Slum Free Cities plans for some 30 cities which have been selected for a ‘National Slum Free City Campaign’. None of the national policies on poverty has any focus on children’s well-being or development, however, or on slums as vibrant neighbourhoods that offer affordable housing to Indian citizens.

Slum Free Cities is operationalised through a government scheme called *Rajiv Awas Yojana* (RAY), using JNNURM support. RAY sees slum settlements as spatial entities that can be identified, targeted and reached through the following development options:

- 1 **slum improvement:** extending infrastructure in the slums where residents have themselves constructed incremental housing
- 2 **slum upgrading:** extending infrastructure in the slums along with facilitation of housing unit upgrading, to support incremental housing
- 3 **slum redevelopment:** in-situ redevelopment of the entire slum after demolition of the existing built structures
- 4 **slum resettlement:** in case of untenable slums, to be rehabilitated on alternative sites.

RAY provides detailed guidelines for spatial analysis and situation assessment and recommends a participative process, involving slum communities with the help of NGOs and community-based organisations active in the area of slum housing and development, to identify possible development options. Slum Free Cities provides an opportunity for new thinking, as well as posing a problem to municipalities and NGOs who may not have the technical knowledge and imagination to create innovative community-driven solutions.

As the well-being of children – in terms of health, nutrition, education and protection – is closely connected to the quality of physical living environments and to the delivery of and access to services, children must be central to slum improvement programmes. Slum improvements funded by JNNURM should be used to make Indian cities child-friendly, and build on the assets of intricate social networks, inherent walkability and mixed uses which are considered by new planning theories to be vital in making neighbourhoods sustainable (Neuwirth, 2005; Brugman, 2009).

Slum Free Cities planning guidelines already incorporate many elements that could secure children’s right to an adequate standard of living, such as secure tenure, improved housing, reliable services and access to health and education. However, intentions are often not translated into action. Children’s direct participation in local area planning and design for slum improvements would be a good step forward in creating child-friendly cities in India. Action for Children’s Environments (ACE) is currently working on a study supported by the Bernard van Leer Foundation to understand how the first phase of JNNURM-funded slum improvements have affected children, with the aim of informing these policies and improving the practice of planning and implementation of projects to make slum redevelopment more child-friendly.

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Household air pollution: a cause of lung disease among children

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Young children are more vulnerable than adults to the harmful effects of breathing smoke indoors. This article describes the two major sources of household air pollution – tobacco smoke and smoke from biomass fuel – and work being done by the World Health Organization and others to reduce young children’s high levels of exposure.

In 2002 the World Health Organization (WHO) launched an initiative to improve the protection of children from hazards in the physical environment. ‘Our top priority in health and development must be investing in the future – in children and the young – a group that is particularly vulnerable to environmental hazards,’ stated WHO’s then Director-General, Dr Gro Harlem Brundtland. At the World Summit on Sustainable Development in Johannesburg, South Africa, she inaugurated the Healthy Environments for Children Alliance to which many international organisations, nations, and non-governmental organisations have responded (WHO, 2002a).

In the 10 years since the launch of this important initiative, much more has been learned about the impact of the physical environment on human health. The WHO has estimated that 24% of the global disease burden and 23% of all deaths can be attributed to environmental factors. Among children 0–14 years of age, the proportion of deaths attributed to the environment can be as high as 36% (Prüss-Üstün and Corvalán, 2006).

Some of the biggest threats to children’s health are found in the very places that should be safest – their homes. Exposures once thought to be just a nuisance are now understood to pose dangers to children’s health and development. Two very important exposures that threaten children at home come from very common sources: cigarettes and household solid fuel use. Children who breathe air that is contaminated by smoke have more lung diseases than children who live in smoke-free homes. In fact, in developing countries, about 42% of lung diseases are attributable to environmental causes.

Children are more vulnerable to inhaling smoke for developmental, physiological, and behavioural reasons:

- **Developmental** Children’s lungs are growing rapidly during the first year of life and they continue to develop air sacs through their first 4 years. Exposure to smoke during these formative years can hinder normal lung development.
- **Physiological** Children breathe more air per kilogram of bodyweight than do adults. Children also react to certain toxic substances in smoke more severely than adults because of their narrower air passages and their smaller size. Furthermore, some air pollutants are more concentrated closer to the ground – in the air children breathe, given their small stature.
- **Behavioural** Young children are often unaware of smoke around them and – especially those who have not yet learned to walk – are typically unable to escape from the smoky environment.

Smoke from tobacco

More than 1000 million adults smoke cigarettes worldwide. About 5 million people a year, almost 14,000 every day, are killed by tobacco – more than by any other agent. By 2030 tobacco will kill 8 million people a year; 70% of these deaths will be in developing countries.

Almost half of the world’s children breathe household air polluted by second-hand smoke. Second-hand smoke contains more than 4000 different chemical compounds, many of which are poisons. Exposure to high levels of second-hand smoke causes mucous membrane irritation and respiratory effects resulting in rhinitis, cough, attacks of asthma, headache, eye irritation, and sudden infant death syndrome. Exposure to second-hand smoke may also increase tuberculosis risk (Tipayamongkhogul *et al.*, 2005). Children whose parents smoke are more likely to become smokers themselves. There is no safe level of exposure to second-hand smoke.

Reducing exposure to tobacco smoke can have positive effects on child health. Studies of children with asthma have documented that if the parents expose the child to less cigarette smoke, the child’s asthma symptoms will be less severe.



Every child should have the right to breathe clean air, uncontaminated by smoke from tobacco or biomass fuel, in order to ensure their healthy development. Photo • WHO/Christopher Black

The WHO has urged all countries to pass laws requiring all indoor public places to be 100% smoke-free. The World Health Organization Framework Convention on Tobacco Control, the first international public health treaty developed under the auspices of the WHO, provides a comprehensive approach to reducing the tremendous health burden caused by tobacco.

The Framework Convention on Tobacco Control is a significant milestone in public health. Developed in response to the globalisation of the tobacco epidemic, it has been one of the most rapidly embraced treaties in the history of the United Nations. It was adopted by the World Health Assembly in 2003 and entered into force in 2005. More than 170 of the 193 member states of the WHO are parties to it. It calls for enhanced international cooperation to protect present and future generations from the devastating health consequences of tobacco consumption and second-hand smoke exposure (WHO, 2005a).

Smoke from biomass fuel

About 3 billion people around the world use solid fuels – either coal or biofuels, such as wood, charcoal or dried manure – for cooking. In low-income countries 90% of rural households, and a total of two-thirds of the households in developing countries, use biomass fuels for cooking and/or heating. This means they breathe household air that is heavily polluted from burning these fuels.

The smoke these people breathe contains toxic substances such as particulates, carbon monoxide, nitrogen oxides, sulphur oxides, benzene, formaldehyde, and polycyclic aromatic hydrocarbons. Household sources of air pollution can produce very high exposure levels; the levels of particulate matter that are produced by burning biomass fuel are much higher than permitted under typical regulatory limits for outdoor air pollution. As mentioned, infants and young children are more vulnerable to the effects of these toxic substances because their lungs are still growing rapidly. Further, because infants and young children are usually with their mothers while the mothers are cooking, they spend many hours very close to fires.

High levels of household air pollution and long periods of exposure increase the risk of lower respiratory tract illnesses such as pneumonia and the risk of tuberculosis among children. The WHO estimated that the household smoke from solid fuels accounted for the third highest disability-adjusted life years for children 0 to 4 years of age (WHO, 2002b).

‘Some of the biggest threats to children’s health are found in the very places that should be safest – their homes.’

Behavioural interventions – such as keeping children away from the stove while cooking, using dry wood, and cooking outdoors whenever possible – can help reduce children’s exposure to smoke. There also are effective interventions that substantially reduce exposure to household air pollution. Some interventions focus on using cleaner liquid or gaseous fuels, such as LPG or kerosene. Other interventions use improved stoves. For example, a study of child pneumonia in Guatemala randomised some homes to use an improved chimney wood stove and others to continue with the traditional 3-stone open fire. The improved stoves resulted in important reductions in children’s exposure (Smith *et al.*, 2011). Among children under 18 months of age, the researchers saw no reduction in doctor-diagnosed pneumonia, but they did see a significant reduction in severe pneumonia, which could have important implications for reduction of child mortality.

A new Global Alliance for Clean Cookstoves, which is led by the United Nations Foundation, involves a number of United Nations agencies (including the WHO), donors, non-governmental organisations, civil society and country partners. The Alliance promotes improved biomass cooking stove designs that promise to reduce household air pollution, and biogas stoves that efficiently burn methane produced by sewage and animal waste as a clean household fuel.

The WHO is leading efforts to evaluate which of these new technologies produce the least emissions and thus are best for health. The WHO is also preparing new indoor air quality guidelines for household fuel combustion. These build upon existing WHO outdoor air quality guidelines (2005b) and recently published WHO guidance on levels of specific indoor pollutants (2009). The ultimate goal is that every child should have the right to breathe clean air, uncontaminated by smoke from tobacco or biomass fuel, in order to ensure their healthy development.



Behavioural interventions – such as keeping children away from the stove while cooking, using dry wood, and cooking outdoors whenever possible – can help reduce children’s exposure to smoke.
Photo • WHO/Anna Kari

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According to a study carried out by the Bernard van Leer Foundation in selected districts of three regions in Peru, falls were the most frequent kind of accident, followed by stings or animal bites, and burns. Photo • Courtesy INFANT

Avoidable accidents: children's injuries and their links to the social and family environment

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Accidents do not occur randomly. Studies show that prevalence and severity of children's accidents are linked to various factors including family income, overcrowding and the mental health of carers. This article considers the wider literature as well as two specific studies from Peru, and seeks to place the issue of accidental injuries on the early childhood public health agenda.

The *World Report on Child Injury Prevention*, published by the World Health Organization and UNICEF (2008: 2), finds that accidental injuries are the cause of 30% of deaths in children aged between 1 and 3 years, almost 40% in children aged 4, and 50–60% in children aged 5 to 17. Road traffic accidents alone are the second-largest cause of death in children aged between 5 and 14.

For every one of these fatal accidents there are, of course, many more accidents that children survive – sometimes with devastating physical or mental damage that curtails their activities in the long term. The most common results of accidental injury include head injuries, open wounds and poisoning, according to 2004 figures for children under the age of 15 around the world (WHO and UNICEF, 2008: 7).

A study in the USA in the 1980s showed that for each fatally injured child under the age of 19, a further 45 needed hospitalisation and more than 1300 were taken to an accident and emergency unit and then discharged (Gallagher *et al.*, 1984). Even when the effects are not long-lasting, treating the injuries caused by these accidents involves a huge financial outlay for healthcare systems (WHO and UNICEF, 2008: 7) or for families without healthcare insurance.

Despite the prevalence of accidental injuries, they have not always been regarded as an important public health matter. According to literature reviewed by Bartlett, this may be due to accidents being seen as random events (2002: 1). Accidents are linked to notions of chance and inevitability, and there is a fatalistic tendency to see unintentional injuries as an unavoidable evil (Tursz, 1986

in Bartlett, 2002: 1). It is a mistake, however, to think of accidents as random.

Factors linked to children's accidents

Several studies have pointed to factors that affect the prevalence and severity of children's accidents. Notably, the frequency of accidents is much greater in poorer homes, with the highest rates seen in the child population of low-income countries (WHO and UNICEF, 2008: 1).

In 2010, Laflamme, Hasselberg and Burrows published a review of numerous articles demonstrating a link between socio-economic inequality and children's accidents (Laflamme *et al.*, 2010) including pedestrian road traffic accidents, bicycle and motorcycle accidents, car accidents, drowning, poisoning, burns and falls. The studies also found that more educated mothers were better at protecting their children from risk.

A link between overcrowded living conditions and the risk of road traffic accidents was highlighted in a study carried out by Donroe and colleagues in the district of San Juan de Miraflores in Lima, Peru (Donroe *et al.*, 2008: 4). The study also found that particular environmental factors such as a greater number of street traders, the absence of lane markers on the roads, vehicles travelling at higher speeds, and more vehicles using the road increased the likelihood of children suffering pedestrian road traffic accidents.

According to the WHO and UNICEF, there is some evidence of the link between the risk of injury and the absence or presence of supervision. The risk becomes substantially greater if the carer shows a pattern of substance abuse or has some kind of mental disorder. Howe *et al.* (2006) documented the connection between injury occurrence and the incidence of common mental disorders in children's carers. Lack of care is also linked to a background of domestic violence in mothers. Jewkes *et al.* (2001) found that the impact of violence on the mental and physical health of mothers affected their ability to give their children proper care.

Not only are children in low-income families more likely to suffer accidents, they are less likely to have access to good-quality medical care. This link between resources and access to good medical treatment might explain the variation in accident mortality rates in different parts of the world. For example, according to data quoted by the WHO and UNICEF, in one study carried out in Nigeria, 27% of children admitted to hospital with burns died as a result of their injuries, compared to a study in Kuwait, which found that only 1% of children died.

Recent evidence from Peru

In Peru, the first two stages of the Young Lives study asked a series of questions about accidents. Using these data (Benavides *et al.*, 2011), we have calculated that falls are the most common kind of accident, with 15% of children mentioning having suffered this type of accident, followed by hard blows to the head (4%), burns (3%) and fractures (2%). The study found that symptoms of depression in mothers increased the likelihood of any of the four kinds of accidents occurring.

A separate study carried out by the Bernard van Leer Foundation in selected districts of three regions in Peru also showed that falls were the most frequent kind of accident, followed by stings or animal bites, and burns. Drowning was found to be more common in rural areas, and in some places, such as Belen, 7% of the children of the sample had almost died of drowning. This study found that three key factors affect the occurrence and severity of accidents.

- The first factor is the extent to which children are supervised in and outside the home, and if toxic products are stored within their reach.
- The second major factor is the presence of open rubbish tips and waste disposal sites in the community. Dirty streets full of rubbish not only spread disease among children, they are also the scene of many more accidents than streets which are clean and tidy.
- Finally, the study found that children living in homes where episodes of domestic violence take place are more likely to suffer serious injury. In those contexts, children are not well supervised and the probability of accidents is higher.

There are several clear policy implication from these studies. They show, for example, the importance of efforts to tackle overcrowded housing; improve regulations on use of public roads; clean up public spaces; address the effects of domestic violence and mental illness on mothers' caregiving capacity; and improve supervision of children when their primary carers are otherwise engaged. Children's accidents are not random, and should be firmly on the early childhood health working agenda.

'The studies also found that more educated mothers were better at protecting their children from risk.'



Studies also show several clear policy implications such as the importance of improving regulations on use of public roads and cleaning up public spaces, among others.
Photo • Courtesy Asociación Red Innova

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Note

For more information about Young Lives, visit www.younglives.org.uk

A research and social mobilisation experience in a low-income Brazilian community

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Action from public authorities is often necessary to solve problems of children being exposed to unhealthy environments. However, such action must be based on sound data establishing the extent of the problem – data which are often lacking in low-income contexts. This article describes how *Terra dos Homens* engaged a community in Brazil to gather the data necessary and prompt the local authority into appropriate action.

Lucía brought up her four children alone, getting by on what little money she could earn from refuse she collected from the streets of Rio de Janeiro. With her children's father serving a prison sentence for drug trafficking, she had no option but to take her young children with her onto the streets as she scavenged for rubbish, exposing them to environmental hazards.

Lucía's children are now in school, and she works as a community volunteer with *Terra dos Homens* on a project which has made significant progress towards ensuring that other mothers who work on the streets have an alternative to taking their children with them. The project began in 2008, in a community called Mangueirinha, in the town of Duque de Caxias, about 40 minutes from the centre of Rio de Janeiro.

The success of the project is rooted in its approach, which started with a diagnostic exercise to map the community and identify potential partners. Our entry into the community was a gradual process, with the aim of getting to know the area and its people, culture and history. We took care to involve individuals who could potentially lead a truly local project that would really benefit the people living there.

As is the case in many low-income towns in Brazil, official institutions have very little data about the people who live there. To be able to base the project on sound data, therefore, we ourselves had to carry out a census to list the number of inhabitants, the average number of people living in each home, how many children went to school, people's views on what kind of public and social services were needed, and so on. We engaged volunteers

from the community to carry out the interviews. In the words of Isabela (aged 21), one of the young volunteers:

From the start we realised that many of the mothers taking part in the project collected waste for recycling. As they were very poor and the community had no nursery school, most of them took their children with them to pick up rubbish. We came to the conclusion that we ought to find out exactly how many were in this situation.

From knowledge to action

Low-income communities in Brazil are often subjected to data-gathering exercises which hardly ever lead to improvements in their quality of life. Unsurprisingly, then, the community interviewers encountered scepticism about the value of the exercise. According to Beth (aged 23), one of the community interviewers:

People sometimes said to me: 'I don't want to answer any kind of questionnaire, because it's not going to change my life in the slightest.'

The survey process also revealed the difficult or non-existent relationships between community residents and the local public authorities. Beth continues:

Or they said to me: 'You're not going to take that [the information] to the Child Protection people are you?', because they were leaving their children locked in at home while they went to work and they were afraid of what we would do with the information. People are scared, that's why they were a bit suspicious.

Nonetheless, the census enabled us to identify the scale of the problem of children being exposed to unhealthy environments by accompanying their parents to work on the streets. Out of nearly 6000 residents, we found 112 families who were street sellers or who collected material for recycling, accompanied by a total of about 200 children up to the age of 8.

When we asked them 'What does the community need?', we found that the main concern was the lack of a nursery, which would enable parents to go out to work without having to worry about their children. With hard data to hand, we organised a formal presentation of results, attended by families, for the local authorities. It was the first time the Mangueirinha community had



At the end of 2011, the nursery school opened in Mangueirinha community, and it now caters for 250 children.
Photo • Courtesy *Terra dos Homens*, Brazil

been able to back up their demands for public services with actual figures. At the end of 2011, the nursery school opened and it now caters for 250 children.

Strengthening the relationship between public and authorities

The Employment, Tax, Science and Technology Secretary for the town of Duque de Caxias, Jorge César, says:

You can't think of assigning public money without having first obtained a proper reading of the target area and its inhabitants. The starting point is when you have gathered and analysed all this data. Our relationship with Terra dos Homens has been very positive because it is an organisation that acts 'in loco', interacting with local people, and there's nothing better than having a dialogue with a set of people who are aware of the situation on the ground.



For the development of the project, *Terra dos Homens* took care to involve individuals who could potentially lead a truly local project that would really benefit the people living there.
Photo • Courtesy *Terra dos Homens*, Brazil

This type of intervention shows how civil society can work to promote change by helping the community to gather data, which in turn enables it to engage in productive and articulate negotiation with public authorities. Establishing and maintaining such partnerships require time, resources and energy, but promise social change that is specific and lasting.

‘We found that the main concern was the lack of a nursery, which would enable parents to go out to work without having to worry about their children.’

Working with youth to improve the built environment for young children

Tim Cross, President, YouthBuild International, Somerville MA, USA

YouthBuild International and the Bernard van Leer Foundation began in 2011 to explore ways to work together. This article explains how YouthBuild’s programmes engage unemployed young people in building infrastructure, and the potential of the YouthBuild model to further the Foundation’s goal of improving young children’s health through improving their physical environments.

The seed for the creation of the YouthBuild programme model was sown in East Harlem, New York in 1978 and began, as all YouthBuild programmes begin, with a question posed to young people by a caring adult: ‘What would you do to improve your community if you had the resources you needed to put your ideas for improvement into action?’ The young people had an answer that was both simple and profound: ‘We would rebuild abandoned buildings to create homes for homeless people and take back empty buildings from drug dealers.’

At the time, over 300 abandoned buildings blighted the East Harlem landscape, while thousands of idle teenagers and hundreds of homeless people roamed the streets. The young people’s answer provided an obvious solution to all three tragic problems. Why not train and employ out-of-school, unemployed young people to rebuild the buildings, creating affordable housing for the homeless?

YouthBuild is grounded in the philosophy that given the right context – that is, an environment filled with respect; a caring community; a positive peer group; a valued role in the neighbourhood; an opportunity to develop skills, high standards of self-discipline and performance; and the means for future education and employment – young adults with troubled pasts can transform themselves into productive citizens with viable futures.

The YouthBuild programme design consists of five components: education, technical skills training, leadership development, counselling support and placement of graduates (placement in jobs, self-employment, or continuing education or training

opportunities). These five components, though distinct in their focus and outcomes, are experienced by students as integrated and working in unison to comprehensively address the livelihood needs and aspirations of young people while addressing critical community development challenges.

During the 6- to 12-month full-time YouthBuild programme, young people spend half of their time learning construction skills by building or rehabilitating community infrastructure, such as housing, schools, health clinics and playgrounds; the other half of their time is spent in a YouthBuild classroom advancing their basic education skills towards a recognised academic credential. The students are part of a mini-community of adults and young people committed to each other’s success and to improving the conditions of their neighbourhoods. The YouthBuild experience provides a vehicle for soft and technical skills training, applied learning and leadership development, and is a highly effective and comprehensive introduction to the world of work.

In the USA, YouthBuild supports a network of 273 independent programmes in 45 states, engaging 10,000 young people on an annual basis. Since 1994, more than 110,000 YouthBuild students have produced over 21,000 units of low-income housing.

International work: contexts and consequences

The YouthBuild model is being adapted for implementation by local NGO, government and private sector partners in 13 countries – which include industrialised nations, emerging economies, developing countries, and locations recovering from natural disasters, violent conflict, and political unrest. Since 2007, over 7000 young people have enrolled in 56 YouthBuild programme sites outside the USA. The consistent features of the YouthBuild implementation contexts include:

- large numbers of young people between the ages of 15 and 25 who are not connected to formal education or opportunities for safe, productive employment
- most livelihood opportunities for young people being in the informal sector because there is a significant

mismatch between the numbers of young people needing jobs and the numbers of jobs that will be generated by the formal economy

- destroyed, dilapidated, or insufficient stocks of community infrastructure that need to be built or rebuilt
- employment and training systems that are not reaching or retaining marginalised young people, or are providing training that is not aligned with the demands of the private sector
- high degrees of community unrest, manifested through conflict or violence, that require the input and leadership of local young people in order to be resolved
- locally led and effective NGO, government, private sector, and development-finance partners with a commitment to reach disconnected young people, and prepare them for and introduce them to positive livelihood opportunities.

Working on construction sites provides all the participants with the opportunity to make critical contributions, creating practical, relevant, and inspiring forums for young people to work together on common projects, building tangible skills and mutual understanding with their peers. This shared construction experience has been shown to effectively bridge divides among young people from different economic classes, ethnic groups, religious backgrounds and from groups, such as rival gangs, who have long-standing conflicts.

‘The YouthBuild model can change the often negative perceptions of young people in the community, and provide alternative role models for young children which could help inspire them to pursue paths of non-violence.’

The YouthBuild experience gives the young people a direct, tangible experience of how their individual actions can make a real, visible difference in the world around them. Construction activities take place in the local communities where the young people, their peers and their families live. As a result, the community at large also starts to view young people as active leaders, taking responsibility for the development of their own lives and the life of their communities.

For example, YouthBuild students in Rio de Janeiro have designed plans for the redevelopment of *favelas*; in post-earthquake Haiti, YouthBuild students are constructing 12 training centres for young people to prepare them to rebuild houses, community centres and health clinics; in El Salvador, formerly gang-involved and gang-vulnerable young people helped to design and construct a community centre; in north-east Bosnia, Serbian, Bosniak, and Croatian young people worked side by side to upgrade homes, parks and playgrounds; in Mexico, YouthBuild students at 21 locations in Ciudad Juárez have rebuilt public spaces and playgrounds, providing community gathering spaces in a city that experienced unprecedented levels of violence; and in South Africa, YouthBuild students built 119 units of affordable housing for residents of the Ivory Park informal settlement.

The words of one YouthBuild graduate, Natalia, testify to the transformative power of the programme on participants and communities alike:

The construction part of YouthBuild was the most amazing thing I ever did. We built a playground outside an apartment complex full of bullet casings, needles, drugs and bottles. I kept at the work on the site until my body ached. As I dug up the ground I saw people looking out at us from their apartments. One old lady came outside and said to us: ‘I have lived here for 30 years and I have seen everything that has happened here. I have seen bodies carried out of here. But I have never seen anything like this. You are just a blessing.’



This shared construction experience has been shown to effectively bridge divides among young people from different backgrounds.
Photo • Courtesy YouthBuild International

The potential for impacts on young children

YouthBuild students are also, of course, brothers, sisters, spouses, young parents, and members of multiple community, social, religious and political groups. The impact of the YouthBuild experience has been shown to have powerful ripple effects in these other life spheres, hence the interest of the Bernard van Leer Foundation in the YouthBuild model as a potentially cost-effective and scalable way to pursue the goal of improving young children’s health through improving their physical environments. There are five main hypotheses for how YouthBuild programmes could have an impact on young children.

- 1 Given that many YouthBuild participants are new parents – up to 70% in some programmes – by providing them with a pathway to sustainable livelihoods, the YouthBuild intervention positions young people to improve their self-esteem and bring additional resources to their families, which could translate into direct positive effects on the health and learning outcomes of their children.
- 2 As YouthBuild programmes also offer an alternative to gang activity, they may help to reduce the incidence of violence affecting young children along with other members of the community. YouthBuild students exercise leadership to interrupt cycles of violence experienced by families from generation to generation and, by extension, to reduce the numbers of young people who are turning to violence as a result of their own experience of violence as children.
- 3 The community assets which YouthBuild participants build can have a directly positive impact on the health and safety of young children, if they are built to child-friendly specifications.
- 4 According to social disorganisation theory, improvements in the built environment can help to reduce violence and improve mental health outcomes within the community – including, potentially, among children – by creating a greater sense of order. The physical manifestation of economic poverty includes abandoned, dilapidated or destroyed physical infrastructure and lack of green spaces. YouthBuild students create safe, well-kept and organised spaces where people gather for learning, work, fellowship, or recreation.

- 5 Finally, the YouthBuild model can change the often negative perceptions of young people in the community, and provide alternative role models for young children which could help inspire them to pursue paths of non-violence. In particular, siblings of YouthBuild students are shaped by the experience of seeing their brothers and sisters take steps to transform their lives and create permanent community assets that stand as a visible legacy of their commitment to serve others.

YouthBuild and the Bernard van Leer Foundation are currently looking at the viability of implementing adapted YouthBuild programmes to test these hypotheses in Iquitos/Belen, Peru. The organisations are also working on an evaluation protocol to identify the impact of YouthBuild programmes currently operating in the *favelas* of Rio de Janeiro on the lives of young people, children and families and on the design and construction of local infrastructure.

Challenges and future directions

The comprehensive YouthBuild programme design is complex and can succeed only if the five components of the design – education, technical skills training, leadership development, counselling support and placement of graduates – are experienced by young people as consistent and well integrated. This in turn requires the programme design to leverage the experience and resources of stakeholder partners from a wide cross-section of the ngo, government, business and development finance sectors.

Effectively mobilising and directing the resources of these stakeholders is often challenging and can be managed only through regular communication with each partner, and through planning processes designed to refocus the collective will of all partners on the central outcome objectives of the programme. The executive leadership of a YouthBuild programme must therefore combine a fundamental belief in the potential of all young people to learn, lead, and contribute to their communities, with an entrepreneurial approach to building support for the programme and sustaining

its presence in local communities. Strong programme outcomes directly correlate to the longevity of the director's experience, as he or she accumulates knowledge and experience while running the programme over several cycles.

The most consistent among the challenges for YouthBuild programmes is how best to secure placements for young people in jobs, internships, self-employment or continuing education upon graduation. This most critical point of transition – when young people leave the safe, supportive environment of YouthBuild, and must navigate often chaotic livelihood environments – has proven difficult to manage towards consistent success. Even those young people who are successfully placed in productive employment upon graduation often find it difficult to retain those first placements and must draw on their YouthBuild learning and graduate support network to manage their next transition.

Four interventions have proven key in addressing this placement challenge. The focus on placement must begin from day one of the programme, with staff focused on building relationships with employers that can lead to internships or jobs; skills training must be demand-driven and include hands-on work experience; follow-up support services should be an integral part of the programme design for at least 6 months after graduation; and organised alumni networks of YouthBuild graduates must be nurtured to provide a powerful peer network of support and resource.

As the YouthBuild programme model is applied in different locations around the world, several consistent areas of adaptation have begun to emerge. First, the community assets that young people are creating have diversified well beyond housing to include community centres, schools, health clinics, orphanages, playgrounds and sustainable 'green' infrastructure, reflecting the priorities for community infrastructure building based on local needs. Second, youth lending and adapted business development support services are being offered as part of a self-employment training

pathway in YouthBuild programmes in settings where there is a mismatch between formal sector employment and the number of young people needing employment, and where the majority of livelihood opportunities can be found in the informal economic sector. Finally, there is a broad variation in the length of the programme, based on the education and training needs of the young people, the unique developmental challenges they bring into the programme, and the economic pressures they face to earn incomes to support their families. For example, YouthBuild programmes that serve only young women are being designed for implementation in several countries where the unique challenges facing them require a highly customised set of adaptations.

We know that the world's 1.5 billion young people between the ages of 12 and 24 represent a vast reservoir of vision and leadership that must be mobilised in order to solve many of the world's most challenging problems. According to UN Habitat estimates, by 2030 as many as 60% of urban residents will be under 18 years of age – a generation that is just now starting to be born to today's young adults (Brookins *et al.*, 2012). YouthBuild firmly believes that all of today's young people have the potential for a lifetime of productivity and good parental role modelling, if only they can access the necessary support, encouragement, guidance and training to assemble sustainable livelihoods.

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Note

For more information about YouthBuild International, visit www.youthbuildinternational.org

'The YouthBuild experience gives the young people a direct, tangible experience of how their individual actions can make a real, visible difference in the world around them.'

Improving living conditions for the Roma minority in Europe

Alexandros Tsolakis works as a policy expert at the European Commission's Directorate General for Regional Policy. Here he talks to *Early Childhood Matters* about how the EC's ongoing work on including Europe's Roma minority can play a part in improving the physical conditions in which young Roma children are growing up, and therefore enhance their healthy development and prospects in life.

The lack of infrastructure which characterises many Roma minorities in Europe must translate into difficulties for their children. We can imagine, for instance, that lack of reliable running water will make it difficult to maintain hygiene standards, roads which become impassable in heavy rain will make it more difficult to access school and medical facilities, and so on.

Yes, it's evident from all available studies that poor living conditions are a key factor in the twin vicious cycles of discrimination and social exclusion faced by many in the Roma minority in Europe. For example, a mother would feel ashamed to send a child who wasn't clean to school, for fear of the child being stigmatised. Health problems caused by insanitary living conditions also keep Roma children from school. And if those children don't get an education, they will be less able to break the cycle of poverty for their own children.

As well as physical conditions, of course, it is necessary to understand that from the point of view of some Roma, it is seen as protecting their children to keep them in an environment that is isolated from wider society. So all efforts to improve physical conditions must be accompanied by working with the natural desire of Roma mothers, like all mothers, for their children to have better life than their own. This is where early childhood education is very important, as it permits the mothers to understand that education is not a process through which they have to abandon their children, but one through which they help their children to build a future. It is clear everywhere that women – and, in particular, mothers – have a pivotal role to play.

In several countries, government social housing policies could actively contribute to segregating Roma communities. What are the

disadvantages of this in terms of creating healthy environments for young Roma children? What can be done about it?

The segregation issue is extremely difficult and complex, and you cannot have a dogmatic policy that applies in all locations. Spain's experience shows that it can be done, as Spain has practically managed to desegregate, although it has taken them many years. But you have to consider local circumstances – what works in Spain may not necessarily work elsewhere. Roma communities, like every other community, differ from place to place – there are some families who are keen to join the mainstream, others are open but in need of help, and still others for whom the idea is anathema. You have to ensure that incentives exist for the Roma to integrate – who are we, the majority, to say they don't have the right to live among themselves if they want to?

Here again early childhood education is a pivotal entry point, because desegregation in education is easier to achieve than in housing, which is really a long-term project. If children get high-quality early education, even if in a segregated environment, then that makes it more likely that they will proceed through primary and secondary education in more mixed environments. And that opens up choices, in terms of where to live, that simply don't exist for much of this generation.

We also need to avoid the general tendency to see the Roma as beneficiaries of some kind of passive process, such as giving them houses to encourage them to relocate. Normal citizens don't expect the state to give them houses, so this can actually perpetuate the sense of the Roma being seen as apart from the mainstream. Instead we should see the whole housing process as an opportunity to engage the Roma people economically, for example by creating opportunities for them to work with building companies in creating new housing and infrastructure. This creates economic activity that can begin bringing some of the families into the mainstream. It is very important to create a movement that can support those who want a better future for their children and who see that this cannot be outside of mainstream society.



We should see the whole housing process as an opportunity to engage the Roma people economically, for example by creating opportunities for them to work with building companies in creating new housing and infrastructure. Photo • Selim Iltus

Following the EU framework adopted on April 5 2011, member states submitted their National Roma Inclusion Strategies in December 2011. What is your general assessment of the commitment of different member states to improving the housing conditions and ending residential segregation of Roma community? Are there concrete targets linked to financial resources?

For the time being there is not much that is concrete. These are very theoretical plans, not yet operational. We are engaged in convincing member states to be more concrete about it, so that these plans do not remain beautiful policies on paper which have nothing to do with reality. We are in a dynamic process, and one that should bring change.

Thanks to a recent change in regulations, funding is available from the European Regional Development Fund for investing in social houses for Roma. However, it seems that very few countries are currently intending to take advantage of this. Is this a reason to be pessimistic about the prospects of achieving tangible progress in the housing conditions of Roma people?

No, this is normal: we did expect it would be difficult for member states, as this cannot be a top-down approach. It requires municipalities, or regions, to become interested in committing to a long-term process. When we talk about an integrated approach it means proper participation, so that the marginalised people living in these neighbourhoods are involved in infrastructure planning. Also the majority population must see this as something which benefits the whole community, and not just as a privilege given to the gypsies. These are big operations and it takes time to create the right conditions.

In fact, I can say that there has been more interest than one might have expected. We have four municipalities in Bulgaria that are ready to start the process, and four more in Romania where we are now hoping for a green light from the Government.

What examples could you point to of existing good practice in successfully taking a holistic approach to enhancing housing conditions for Roma communities? For example, are there lessons learned from the progress made in Eastern and Central Europe which can help other EU countries to make progress in Roma inclusion, or the other way around?

We have certainly learned that when projects have not had the desired results, it has tended to be because of a lack of administrative planning for and commitment to the long term. In terms of good practice, we could point for example to the city of Ostrava, which has made momentous progress in integrating its Roma communities through a 10-year plan, since being the subject of landmark European Court of Human Rights verdict in 2007 which established that the practice of segregating Roma children into special needs schools was an unlawful one.

However, we must avoid thinking of a replicable model and instead think in terms of methods that can be applied in relation to the very varied realities on the ground. The exchange of good practice is mostly an exchange of understanding about methods. These have to be tailored to the local needs of real communities because that's where people live, where exclusion is experienced or overcome, where discrimination is expressed or not expressed.

'Early childhood education is a pivotal entry point, because desegregation in education is easier to achieve than in housing, which is really a long-term project.'

Is there a role for the philanthropic and non-governmental sectors in child-centred holistic approaches to improving the living conditions of the Roma?

Of course, we need civil society to bring added quality to the work, to learn and apply methods – within the understanding that this is a long and complex process, one that requires transcending the typically sectoral thinking of our time and recognising the importance of varied realities at local level. Naturally, there still needs to be national and European organisation among governments and civil society for exchanging experience and ideas.

What can be done to ensure that Roma communities themselves are effectively involved in addressing the current situation and ensuring healthy environments for their children?

We have to make a real shift from a charity mindset to an approach of social development and economic growth, engaging the Roma as actors in the economy. If we don't have that, we will never help poor Roma communities to get out of where they are, and instead we will continue to see them as a burden on our philanthropic conscience. That means putting together proper infrastructure planning, with work on education and health, so people begin to get organised and

engaged with the mainstream economy. All of these things need to be put together and nobody has done that before, so it is indeed quite a process.

It is, however, a process we can look to with qualified enthusiasm. For more than 20 years I have been working on issues affecting the Roma within the European Commission, and I can say there has never before been such a high level of interest among colleagues in different areas – employment, education, social, regional, agricultural, and so on. This is an important opportunity and it is imperative that we succeed in capitalising on the political commitment that currently exists.

Child-friendly cities – sustainable cities

Pia Björklid, Professor Emerita, Department of Education,
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How can planners integrate the environmental experiences that children have into the processes of planning for sustainable development? Studies show that children aged 11–12 years, and professionals with a child-centred perspective, identify the same features of city life as important, such as reduced traffic and access to public spaces, green areas and meeting places. Adults with a child-centred perspective can therefore act as a bridge between children’s experiences and those of the adult world.

Modern society restricts children’s everyday lives. Increased road traffic, for example, has reduced children’s independent mobility, particularly with regard to their play areas and their school and leisure routes, something which in turn affects their health and development (Prezza *et al.*, 2001; Björklid, 2004; Fotel and Thomsen, 2004; Kyttä, 2004; Nordström, 2004; Karsten, 2005). They become overweight as they move around too little. Responsibility for this often seems to be placed on children themselves, with the implication that it is children who should adapt to the environment.

However, the question should be what the outdoor environment in children’s neighbourhoods can offer them (Spencer and Blades, 2006). As a reaction to the rapid urbanisation taking place all over the world, the concept of ‘child-friendly cities’ has emerged to challenge urban development from an environmental perspective (Hörschelmann and van Blerk, 2012). The concept of child-friendly cities has its background in the 1989 UN Convention on the Rights of the Child (UNCRC), which among other things stipulates that children themselves should be given the opportunity to have their voices heard.

What does it mean for children’s voices to be heard in planning? Horelli offers a definition of child-friendliness as ‘settings and environmental structures that provide support for individual children and groups who take an interest in children’s issues so that children can construct and implement their goals and projects’ (Horelli, 2007: 283). Horelli’s model can be used as a matrix for interpreting children’s perceptions within the framework of community planning, but

community planning needs to develop structures which comprise children’s specific perceptions (Björklid, 2010; Nordström, 2010).

Children and sustainable development
Sustainable development has to a large extent dealt with environmental questions from a natural science viewpoint. Today one of the most productive perspectives on sustainable development emphasises that economic, social and ecological processes are interconnected and should be considered holistically. This means that moral standpoints and social relations should also be taken into account.

Conflicts related to sustainable development may be due to open differences of interest – for example, the priority given to motor traffic over pedestrians in urban environments, with the result that pedestrians’ experience and enjoyment of place is impaired while motorists’ is enhanced. But conflicts can also arise from different ways of understanding, using and appreciating the physical environment. A child’s perspective, for example, is different from that of adults. A safe and developmental physical environment is a prerequisite for the physical health and mental well-being of everyone – but it has a fundamental significance for children insofar as the physical environment creates spaces for children’s development (Clark and Uzzell, 2006), their identity (Twigger-Ross and Uzzell, 1996) and their integration into society (Bronfenbrenner, 1979). What places provide is important not only for the child’s here-and-now but also for their long-term personal cognitive and emotional development.

Research from the perspective of developmental psychology suggests that the ways in which children and young people experience and interpret space is different from those of adults (Nordström, 1990; Matthew and Tucker, 2006). Children use the outdoor environment intensely, if they are allowed to do so and if they can access the outdoors on their own. Children have a sense-oriented and direct relationship to physical environment. Their physical interest in the environment is strong and their orientation to the world is dependent

on bodily information and sense-impressions. After puberty this orientation becomes cognitive and dominated by systematic and abstract thinking.

What is sustainability, from the viewpoint of environmental psychology and a child-centred approach? On the basis of our previous and current studies and other research projects (Spencer and Blades (2006), for example), we know that children’s local environment has a considerable effect on their living conditions and on how they see their environment. This is true not least for children’s independent mobility. Mobility restrictions can also affect the development of emotional bonds between children and the natural environment (Kong, 2000), and can have consequences for the child’s development of spatial skills (see Risotto and Giuliani (2006) for an overview) and their sense of responsibility for the environment (PalMBERG and Kuro, 2000).

It is not just physical surroundings that create opportunities for, and limitations on, children’s independent mobility and use of the environment. This also depends on parents’ understanding, their living conditions and the restrictions they impose. Earlier large-scale studies of children’s independent mobility in different residential areas have shown that parents experience great anxiety for children’s road safety dependent on factors in the traffic environment (Björklid, 1997).

But parents’ lifestyles and living conditions also affect children’s independent mobility insofar as children are increasingly driven by car to different places and activities compared to former times. The nature of childhood has changed from one that is child-centred to one that is over-controlled and over-structured by adults. Children no longer possess ‘street-wise’ attitudes which previous generations of children utilised in moving around and growing up in cities (Francis and Lorenzo, 2006).

Children’s perspectives and child-centred perspectives
Today child-centred views and children’s rights of influence are stressed, often with reference to the UNCRC

and Agenda 21. It should be noted, however, that the child-centred perspective is not synonymous with the child’s perspective. The child’s perspective means that children themselves have made their own contribution. A child-centred perspective is constructed not by the child but by an advocate of the child, with a focus on trying to improve children’s living conditions and looking after their best interests. How are these two perspectives expressed and differentiated with regard to views of child-friendly cities?

In our research about 100 people answered a questionnaire and described how they envisaged a child-friendly city. Teachers in three schools in inner-city Stockholm and outer-city areas distributed the questionnaire to 52 pupils aged 11 or 12. In addition 42 teachers, student teachers and planners answered the same questionnaire. Follow-up interviews were carried out with 13 children (eight girls and five boys) and five town planners (four women and one man). The results show that the children’s and the professionals’ views of child-friendly cities are similar. (It should be mentioned that the professionals chosen for the study had a child-centred perspective.)

Both groups stressed the importance of reduced or no traffic, access to public spaces, green areas and meeting places. The children also pointed to factors that create anxiety and discomfort, such as the presence of alcoholics and drug users in their neighbourhood. Both children and adults stressed safety and security in their descriptions of a child-friendly city. They gave many concrete examples of how they wanted to reduce the traffic and reduce speeds in a child-friendly city (Björklid, 2010).

One girl from an outer-city area described her idea of a child-friendly city:
There wouldn’t be any cars near the city. There would be lots of plants. There would be things to play with such as swings and so on. It would feel fresh to be there. There would always be children there playing. You would share with others. If possible, cars would be solar-powered. You wouldn’t need to lock doors against thieves and so on. And all children and adults would be happy.

And a boy from the same area:

There would be only footpaths and no roads. You would go to a good school. You would have a good environment and good food. Anyone who started fighting would have to leave the city. You would be allowed only environmentally friendly things. There would be a big park. You would have a good prime minister who obeyed. Teachers would be there and would give lessons. There would be only good things around you.

A town planner wrote:

Car traffic on the city's terms, in other words roads constructed as city spaces, not as transport routes; mixed traffic with the priority for unprotected road-users; carefully constructed crossing places; invitations to walk and cycle; not noisy, safe with regard to traffic. Children should be able to walk, cycle and run instead of being driven.

Another town planner wrote:

A 12-year-old should be able to move independently about large parts of the city and feel safe. It's a matter of being able to discover, being able to understand how the city works.

Our results show clear similarities between the views of the children and the views of the professionals – in other words, between the child's perspective and a child-centred perspective.

Children's citizenship and active participation

Children's citizenship and active participation have various implications (Percy-Smith and Thomas, 2009). While the UNCRC expresses a rights perspective as an end in itself, in areas such as the school there can also be a utilitarian aspect which connects it to the school's responsibility to encourage children's citizenship in adult life. Education in sustainable development is not just a matter of instructing children about sustainable development, but also of preparing them to be active members of a society where sustainable development occurs.

Participation includes both formal and informal dimensions. For children, these dimensions are interdependent. Informal participation involves freedom to move about and explore natural and built environments, to get together with others, and to observe and try out roles in public places. In order that participation should not lead to pseudo-democracy, it is important that children be given an input into matters of which they have direct knowledge and experience.

The first step towards participating in the changing of one's own local environment is to acquire knowledge of it – which is something that children do when they are given the opportunity to move about freely and safely outdoors and to explore their local environment through play. Through children's participation in their locality in this informal sense, they come to understand issues discussed in the formal arena of environmental planning, such as traffic flow, green space, watersheds, crime or 'eyes on the street'. These issues become grounded in local realities for them, and they gain experience that they can later contribute to formal processes of community decision making.

With regard to the UNCRC, the focus these days is on children's rights of influence and a child-centred perspective. Having a child-centred perspective means that the adult regards the child as an expert on his or her own situation. But in the final analysis it is the adult who, based on their adult knowledge, experience and viewpoint, can make decisions and must take responsibility for those decisions. Children are experts on their own surroundings and should have rights of influence over their own local neighbourhood. But they also need to have the right to be protected by society so that they are allowed to be children – that is, to play in and explore their local environment and their town or city in conditions that are safe and promote their development.

Children's interest in the environment is clearly strong and their orientation to the world is dependent on physical experience and sensory impressions. We believe that engagement with the environment, which starts early in life during the first formative years and continues to be emotionally important later in life, is decisive for the individual as well as for society's commitment to care for the environment. People with a child-centred perspective on the environment – parents, teachers and others – are important for supporting the development of environmental engagement in children and for sustaining that engagement during growth and upbringing. They are also potentially important in being a communicative bridge between children and society at large.



Some studies of children's independent mobility in different residential areas have shown that parents experience great anxiety for children's road safety dependent on factors in the traffic environment. Photo • Krister Spolander

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The importance of access to nature for young children

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Research shows that young children, like older children and adults of all ages, derive a range of benefits from having access to nature – even if only a small patch of trees on marginal urban land. This article discusses the reasons why nature is important for young children, including that it lays the foundations for an interest in taking care of the environment in later life, and touches on ways in which young children’s access to nature can be enhanced.

A growing body of research attests to the importance of access to nature for human health and well-being. This research has profound implications across a range of areas, from healthcare to productivity in the workplace to urban planning to the design of schoolyards. In terms of urban planning and design, we urgently need – and are slowly experiencing – a paradigm shift towards putting front and centre the important question of how the design of the physical environment can best promote human flourishing.

As an environmental psychologist now working at the intersection of health, planning and design, my entry point into the issue of children’s access to nature has been an interest in the question of what prompts people to take an active interest in managing and safeguarding their environments. This question applies in both rural and urban areas, as the civic skills required to protect a forest or a river are much the same as those required to protect an urban environment. So what motivates people to notice the quality of their environment and take action?

In research in the USA and Norway, I found that the reasons people give when asked this question directly – for example, that they are concerned with human health or to protect resources for future generations – often have their roots in experiences in early childhood. When I asked people in an open-ended way to tell a story about their motivation, most drew on recollections of their childhood, describing connections they had felt to special places where they played as children.

It was not usually in wild lands that interviewees located their memories; often it was in an urban park, a garden, or the marginal green spaces found in many residential neighbourhoods. The connections they described were not necessarily to a sweeping landscape, but could be to a single tree. Even among adolescents, research shows a correlation between those who report having had positive experiences in nature as children and those who are taking action to protect their environment.

Early childhood appears to be a critical point in maximising the chances of such formative experiences by facilitating access to natural areas. When researcher Emily Stanley observed play patterns among children who had free access to a natural wooded area, an athletics field or a built play environment, she found that under-10s tended to gravitate towards the natural area, while over-10s were more likely to favour the built environment as a location for discussion or the athletics field for organised games

Even among older children, though, there are profound benefits to encouraging time spent in natural habitats. Fascinatingly, it does not appear to matter whether the time children and adolescents spend in nature is chosen in their own free time or mandated as part of their school activities; the benefits are the same.

How children benefit from access to nature

The human appreciation for nature appears to be deeply rooted and instinctual. Among adults, research shows clear physiological benefits from contact with nature. Walking in a park, or even looking at pictures of natural landscapes, has been shown to lower heart rates, blood pressure and stress levels. When children are asked to draw things they would like to see in their environment, it appears to be a universal tendency – from the stone cities of Lebanon to the South African veld – for them to draw trees, plants, wildlife and water.

There are varied benefits for young children from having access to nature. Studies show links between access to nature and ability to sustain concentration, delay gratification and cope with stressors. A study in



Early childhood appears to be a critical point in maximising the chances of such formative experiences by facilitating access to natural areas. Photo • Courtesy Emily Stanley

Studies with children leave no doubt about how natural play stimulates the imagination and fosters a deep sense of connectedness to the larger universe of living things. In one ethnographic study of children’s play in a forest, the forest was bulldozed during the research and the children’s grief was clearly profound – it was not just a play location that had been removed, but an entire world of the imagination which they had created.

The box on the next page, prepared for a chapter in a newly published book which examines the role of creating natural habitats in emergency recovery situations, summarises research on features of natural environments that support children’s resilience and strengths.

‘Studies show links between access to nature and ability to sustain concentration, delay gratification and cope with stressors.’

the Netherlands demonstrated links between living further than 1 km from the nearest green space and the prevalence of 15 major illnesses, with one of the strongest links being with anxiety disorders and depression in children aged under 12. Adults in many studies report that memories of a special place in nature experienced in their childhood give them a pool of calm on which they can draw in difficult times.

Ethnographic observations of children’s play show that games are more imaginative and creative in natural habitats than in built play environments. Play in nature has been found to promote physical agility and social confidence. Recent research in Sweden even shows that natural environments tend to encourage play that is gender-neutral, or that brings boys and girls together.

Features of natural environments that support children’s resilience and strengths

Natural surroundings and views of nature

- Better concentration (Wells, 2000; Faber Taylor *et al.*, 2002)
- Better ability to inhibit impulses and delay gratification (Faber Taylor *et al.*, 2002)
- Better coping with upsetting events (Wells and Evans, 2003)

Special places in nature

- Opportunities to assimilate and transform experiences in places that are responsively alive (Sobel, 2002; Goodenough, 2003)
- Opportunities to feel connected to the larger universe of living things (Clayton, 2003)
- Memories that form a reservoir of calm to draw upon (Robinson, 1983; Chawla, 1990; Hoffman, 1992)
- Familiarity with nature as a favourite place that can be recreated in new places (Chawla, 2003)

Nature play

- Better concentration, ability to stay on task (Grahn *et al.*, 1997; Faber Taylor *et al.*, 2001; Kuo and Faber Taylor, 2004; Faber Taylor and Kuo, 2009)
- Better motor coordination and agility (Grahn *et al.*, 1997; Fjortoft, 2001)
- More cooperative, creative social play (Kirkby, 1989; Grahn *et al.*, 1997; Faber Taylor *et al.*, 1998; Herrington and Studtmann, 1998)

Animal companions

- A feeling of acceptance by a responsive, non-judgmental creature (Melson, 2008)

Animal care

- Better self-control (Katcher and Wilkins, 2000; Katcher and Teumer, 2006)
- Better social skills (Katcher and Wilkins 2000; Katcher and Teumer, 2006)

Gardening

- Greater self-understanding (Robinson and Zajicek, 2005)
- Greater self-esteem (Cammack *et al.*, 2002b)
- Better interpersonal skills and ability to work in groups (Hung, 2004; Robinson and Zajicek, 2005)
- Increased sense of connection and responsibility to the environment (Cammack *et al.*, 2002a; Cutter-Mackenzie, 2009)

Adapted from Chawla (2012)

Practical ideas to get children in touch with nature

With young children, a lot can be done in a small space. It doesn’t take a large area to plant some trees, create a water feature and provide patches of soil for children to dig in. In the West, there are many areas with artificial play equipment built on expanses of asphalt; these spaces could easily be filled with trees and bushes instead (Keeler, 2008; Danks, 2010).

As the research indicates, there are also benefits to be derived from looking for opportunities to engage children in creating gardens and tending for animals. This points to the value of activities such as schools engaging their pupils in creating and tending for a natural habitat, monitoring the wildlife that uses the habitat, and passing on the habitat to their successors at the school.

Unfortunately, appreciation of the benefits of access to nature is penetrating the world of urban planning only slowly. However, while it is clearly easier if support exists from city authorities, this is an issue which lends itself to grassroots action. It takes an alliance of various groups, including advocates for children and for the environment, to engage with communities and identify opportunities to create natural areas in neighbourhoods, on housing estates, at preschools – in other words, in the fabric of children’s daily lives.

Naturally, children themselves can and should be engaged in this process, as even preschoolers have clear ideas about what they want and don’t want in their environment.

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We also invite you to use the comments facility on **earlychildhoodmagazine.org** to react to and discuss the issues raised in articles in this edition of *Early Childhood Matters*.

It will, of course, continue to be possible to access *Early Childhood Matters* online in both of the existing ways – as a pdf on bernardvanleer.org, and at the online publishing platform issuu.com.

Coming edition of Early Childhood in Focus on ‘Healthy environments’

The eighth publication in the Early Childhood in Focus series, on the topic of *Healthy Environments*, will be published soon (visit bernardvanleer.org for more information). Funded by the Bernard van Leer Foundation and produced by the Child and Youth Studies Group at The Open University, *Early Childhood in Focus* provides accessible reviews of the current state of research on key policy issues and offers clear messages for policy advocates.

The upcoming publication addresses the close linkages between the physical world children inhabit and their well-being. It looks at the effects of living in urban slums on young children, who are especially vulnerable to physical harm from pollution, traffic and unsafe housing, and identifies the multi-sectorial policies needed to ensure adequate housing, recreational spaces and water and sanitation.

Investing in the development of young children

The Bernard van Leer Foundation funds and shares knowledge about work in early childhood development. The Foundation was established in 1949 and is based in the Netherlands. Our income is derived from the sale of Royal Packaging Industries van Leer N.V., bequeathed to the Foundation by Dutch industrialist and philanthropist Bernard van Leer (1883 to 1958).

Our mission is to improve opportunities for children up to age 8 who are growing up in socially and economically difficult circumstances. We see this both as a valuable end in itself and as a long-term means of promoting more cohesive, considerate and creative societies with equal opportunities and rights for all. We work primarily by supporting programmes implemented by local partners. These include public, private and community-based organisations. Working through partnerships is intended to build local capacity, promote innovation and flexibility, and help to ensure that the work we fund is culturally and contextually appropriate.

We also aim to leverage our impact by working with influential allies to advocate for young children. Our free publications share lessons we have learned from our own grantmaking activities and feature agenda-setting contributions from outside experts. Through our publications and advocacy, we aim to inform and influence policy and practice not only in the countries where we operate but globally.

In our current strategic plan, we are pursuing three programme goals: reducing violence in young children's lives, taking quality early education to scale, and improving young children's physical environments. We are pursuing these goals in eight countries – Peru, India, the Netherlands, Israel, Uganda, Turkey, Brazil and Tanzania – as well as undertaking a regional approach within the European Union. In addition, until 2012 we will continue to work in the Caribbean, South Africa and Mexico on strengthening the care environment, transitions from home to school and respect for diversity.



**Bernard
van Leer**
FOUNDATION