FROM ALEPPO TO IVY LEAGUE: DOC PREPS FOR SYRIA WAR END

Khaled Almilaji coordinated a campaign that vaccinated 1.4 million Syrian children and risked his life to provide medical care during the country's civil war. Now he's in the Ivy League, learning about how to rebuild Syria's health system when the war finally ends. He is one of three Syrian scholars studying at Brown University, which said last year it would welcome Syrians after dozens of governors attempted to block refugees. Almilaji, 35, received a scholarship to earn a master's degree in public health and moved to Rhode Island in August on a student visa with his wife.

He said he feels lucky because many other Syrian doctors have had to give up their work after sacrificing for five years, watching their families suffer and seeing their children go without an education. "Every time I go inside Syria, I see the smile on the face of families and people. They say, 'We will stay here. We will never go out, and we will still fight this regime,'" he said. "You cannot go out with less energy, just to continue supporting those people."

Almilaji was born in Aleppo, now the epicenter of Syria's conflict. He studied in the coastal city of Latakia to treat disorders of the ear, nose and throat. He was preparing to go to

Khaled Almilaji stands for a portrait on the campus of Brown University in Providence, Rhode Island on Oct 13, 2016. —AP

Stuttgart, Germany, for a residency in March 2011 when anti-government protests sparked the conflict. He treated protesters who likely would have been arrested or killed if they went to government-run hospitals, he said, and he set up field hospitals. "They accept to be killed if this is the way to show the world we are in a revolution here," he said. "But I cannot accept that those people will never go to a protest because they don't have any hospitals to receive them in case they are injured."

Almilaji said he was arrested in Sept 2011 in Damascus, interrogated and tortured. The savagery he witnessed during six months in prison convinced him he was "one thousand percent correct" in opposing the regime, he added. Almilaji returned to Aleppo after his release and cared for protesters' families, considered a crime. A friend who was helping those families was arrested in April 2012. Almilaji escaped to Gaziantep, Turkey, and his parents soon followed.

Insidious
A UN commission found government forces in Syria deliberately target medical personnel to gain a military advantage, by depriving the opposition and those perceived to support them of medical assistance. The commission called the targeting of medical personnel one of the most insidious trends of the war.

Almilaji translated for Syrians in Turkish hospitals and worked to equip field hospitals with ambulances to transfer Syrians from the border. He made trips into Syria to work in a medical clinic in Aleppo and deliver medical supplies. He successfully pushed for the building of underground hospitals because he expected health facilities to come under increasing attack, a fear that proved true. He said he joined the humanitarian arm of the opposition and began monitoring the spread of communicable diseases in northern Syria by setting up an early warning response and alert network.

The first case of polio was discovered through the network in Oct 2013 in eastern Syria, he said. Almilaji planned the vaccination campaign as the administrative director. Teams went house to house and vaccinated 1.4 million Syrian children. He is working with Canadian doctors to establish safe health facilities in Syria, train medical workers and connect hospitals. The group formed the Canadian International Medical Relief Organization, and Almilaji reviews the projects from Providence.

If insurgents are still fighting President Bashar Al-Assad's forces when he graduates in two years, Almilaji plans to work from Turkey with relief efforts that can later facilitate redevelopment. When Syria is stable enough, he wants to return and work on preventing diseases and other health problems, since resources for treating ailments will continue to be scarce. More than 60 US and international colleges provide scholarships for Syrian students to complete their degrees in North America and Europe. The consortium, led by the Institute of International Education, has supported more than 300 Syrian students to date. —AP

HOW SLUMS ARE SHAPING THEIR FUTURES

As the United Nations prepares a 20-year plan to cope with the challenges of booming urbanization, residents of the world's five biggest slums are battling to carve out a place in the cities of the future. Home to more than 900 million people worldwide - or nearly one in every seven people - the U.N. says slums are emerging spontaneously as a "dominant and distinct type of settlement" in the 21st century.

Today one quarter of the world's city dwellers live in slums - and they are there to stay. The U.N.'s 193 member states are set to adopt the first detailed road map to guide the growth of cities, towns and informal settlements, ensure they are sustainable, do not destroy the environment and protect the rights of the vulnerable. Held once every 20 years, the UN's Habitat III conference comes at a time when, for the first time in history, more people live in cities than rural areas.

In 2014, 54 percent of the global population lived in cities but by 2050, this is expected to rise to 66 percent. "We live in the urban century ... when planned, built, and governed well, cities can be massive agents of positive change," UN Secretary-General Ban Ki-moon said in a recent statement. "They can be catalysts for inclusion and powerhouses of equitable economic growth. They can help us protect the environment and limit climate change. That is why we need a new vision for urbanization."

The UN's policy document, titled the New Urban Agenda, says there has been "significant" improvement in the quality of life for millions of city residents over the past two decades, but the pressures of population growth and rural-to-city migration are increasing dramatically. Billy Cobbett, director of the Cities Alliance partnership for poverty reduction and promoting sustainable cities, said urban growth in many parts of the world, particularly Africa, is not driven by rural migration alone but by population growth.

The UN plan stresses that providing transport, sanitation, hospitals and schools is imperative but city strategies must also "go beyond" physical improvements to integrate slums into the social, economic, cultural, and political life of cities. Experts say this policy represents a significant shift in thinking among city planners and authorities who have historically seen bulldozers as the answer to slum settlements.

High-density communities geared to pedestrians along with properties that mix business with housing can offer lessons for management of future growth, they say. Today, unchecked population growth and migration in many world cities - from Kenya to Mexico to India - mean slums and the informal economies and communities created around them must increasingly be seen as an important part of the wider city.

Security First
The UN roadmap highlights that a critical impediment to upgrading informal settlements and sustainable redevelopment is the lack of tenure or ownership of land or property. In 2003, 924 million city dwellers were estimated to be without title to their homes or land and this number, according to the United Nations, is expected to have grown "exponentially". This is a particularly pressing problem in Africa where more than half the urban population - or 62 percent of people - live in shanty towns and 90 percent of rural land is undocumented.

Living without secure tenure means living under constant threat of eviction. Slum dwellers who have no way of proving ownership of assets also have no access to credit, further eroding any motivation to improve homes and neighborhoods. For governments, particularly in poorer countries, slum areas without title are a particularly vexed problem as the great majority are not mapped, little is known about demographics or spatial use, and the way residents have settled is often so dense that housing and services are hard to fit in. The lack of basic information also means they cannot use the most commonly used official land registration systems.

Roads Battle in Kenya
Nairobi's vast Kibera settlement - coming from the Nubian for forest or jungle - is described as Africa's largest slum and comprises more than a dozen villages from Soweto East to Kianda. A mix of ethnic groups make their home there although nobody knows exact numbers. According to the last Kenyan census, the population was 170,070 in 2009 but other sources, including the UN, estimate the settlement is now home to anywhere between 400,000 and one million people.

Much of Kibera's employment comes from the nearby industrial area of Nairobi but an estimated half of Kibera's residents are jobless, surviving on less than $1 a day. Only 27 percent of Kibera's 50,000 students attend government schools, with most attending informal institutions set up by residents and churches, according to the charity Map Kibera. Violence, alcohol and drugs are rife and clean water scarce.

Kibera's residents also struggle with no garbage services, free flowing sewage and the slum became infamous globally for the so-called 'flying toilets' - throw away plastic bags used by residents forced to relieve themselves outdoors. Yet amidst the squalor there are many residents like Peter Nyagasera and his family who have worked tirelessly to improve their neighborhood. Nyagasera and his wife Sarah Oisebe up part of a former dump site in Kibera to create a playground for the resident-run school and a children's centre for orphans. For these children, he says, school is the only place they receive a hot meal each day.

But despite all their hard work, the community has been forced to mount a court challenge to stop construction of a road planned to cut through the area and demolish the school - and this community is not alone. A second group of residents from the marginalized Nubian

group are also without formal titles and fighting for ownership to protect their homes, many recently marked with red crosses for demolition to make way for the highway. Their case will be heard in Kenya's High Court in November but residents are despondent. "Children will suffer," said Nyagasera.

Working Slums
One of the toughest and most vulnerable aspects of life in the slums is the battle to find regular work. Cities are job hubs and proximity to employment has long been a major driver of slum development and expansion. Globally, according to the International Labour Organization, 200 million people in slums were without jobs in 2013 while UNESCO estimates that more than a quarter of the young, urban poor earn little more than $1.25 a day.

Despite this, in many developing economies, the engine room of job creation is found in the heart of informal economies like those in the favelas of Rio or the bustling hives of activity in big Indian cities like Mumbai. Author Robert Neuwirth spent four years researching his book, 'Shadow Cities', which looked at informal economies in global shanty towns. He believes these unlicensed economic networks are vastly underappreciated in scope and power and estimates they account for some 1.8 billion jobs globally. "It's a huge number and if it were all together in a single political system, this economic system would be worth $10 trillion a year. That would make it the second largest economy in the world," he said.

In Mumbai, where an estimated one million people live in the bustling Dharavi slum, resident-owned small businesses - from leather workers and potters to recycling networks - have created an informal economy with annual turnover of about $1 billion. Residents live and work in the same place and are now campaigning actively to ensure that any redevelopment of their homes or construction of new housing takes into account the need for home-based ground floor workspaces.

"People think of slums as places of static despair as depicted in films such as 'Slumdog Millionaire,'" said Sanjeev Sanyal, an economist and writer, referring to the Academy Award-winning movie that exposed the gritty underbelly of Dharavi. "If one looks past the open drains and plastic sheets, one will see that slums are ecosystems buzzing with activity... Creating neat low-income housing estates will not work unless they allow for many of the messy economic and social activities that thrive in slums," he said.

Rahul Srivastava, a founder of Mumbai's Institute of Urbanology, said the biggest impediment to upgrading informal settlements is their "illegitimate" status due to the absence of title. Settlements that are home to fifth-generation migrants cannot be classed as "informal", he says, and it is high time the narrow perception of these neighborhoods is changed.

Dying for a Pee
In Cape Town, the shanty towns of Khayelitsha stretch for miles, a grim brown sea of ramshackle wood and iron shacks that confront visitors arriving at the airport but are out of view of the city's glass towers or the leafy suburbs on nearby hills. Khayelitsha's population, according to the 2011 Census, is 99 percent black. Jean Comaroff, a Harvard professor of anthropology and African Studies, said despite "valiant efforts" from city authorities and activists in recent years, Cape Town itself still offers little room for its slum residents beyond "servitude" - work as domestics or in the service industries. "It is poised on a knife edge and the differences between the beauty of the city itself and what you see on the Cape flats is the starkest you will ever see in the world," she said.

In Cape Town, city authorities are not only struggling with providing housing and sanitation for a burgeoning population but face the task of trying to reverse the apartheid era engineering that built the spatial segregations that still exist today. Experts say that not only is there not enough new affordable housing but what has been built remains distant from employment, forcing long commutes for those who are lucky enough to work.

Inside, however, residents are struggling - and at times losing their lives - due the absence of the most basic service - toilets. According to the Social Justice Coalition's Axolile Notywala, using a toilet can be one of the most dangerous activities for residents and a major problem for women and children. A Commission of Inquiry into Policing in the shanty towns in 2012 found that 12,000 households have no access to toilets and the link between violence, particularly against women and children, and the need to walk long distances at night was highlighted by researchers and activists.

A mathematical model built by Yale University researchers last year concluded that doubling the number of toilets to 11,300 in Khayelitsha would reduce sexual assaults by a third. "Higher toilet installation and maintenance costs would be more than offset by lower sexual assault costs," lead researcher Gregg Gonsalves told the Thomson Reuters Foundation.

DIY Services
Across the world in Pakistan, Orangi Town in the port city of Karachi is believed home to around 2.4 million people although nobody knows exactly as the last census was in 1998. Widely cited as Asia's largest slum, it sprawls over 8,000 acres - the equivalent of about 4,500 Wembley football pitches. Known locally as "katchi abadis", the first informal settlements emerged in the wake of the Indo-Pakistani war of 1947, which led to a huge influx of refugees.

Unable to cope with the numbers - by 1950 the population had increased to 1 million from 400,000 - the government issued refugees "slips" giving them permission to settle on any vacant land.

The settlement's population really exploded in the early 1970s when thousands of people migrated from East Pakistan after the 1971 war of independence, which led to the establishment of the Republic of Bangladesh. Since then, land has also been traded informally, usually through a middleman who subdivided plots of both government and private land and sold them to the poor. Unlike many other slums worldwide the lack of services - not housing - is the major problem.

Communities have built two and three-room houses out of concrete blocks manufactured locally, say activists. Each house is home to between eight and 10 people and an informal economy of micro businesses has emerged as people created livelihoods. In the early 1980s, however, some residents within the enormous slum decided they'd had enough of waiting for governments unwilling or unable to fund sanitation and so embarked on building a sewerage project on a "self-help" basis.

Now globally renowned, the Orangi Pilot Project (OPP) has helped residents design, fund and build their own sewerage systems and pipelines and, since 1980, has brought latrines to more than 108,000 households in a project continuing today. To date, say OPP statistics, 96 percent of the settlement's 112,562 households have latrines with residents footing the bill of 132,026,807 Pakistani rupees ($1.26 million) - all DIY. "In fact, people in the town now consider the streets as part of their homes because they have invested in them and that's why they maintain and clean the sewers too," said OPP's director, Saleem Aleemuddin.

Bottom Up Development
Jose Castillo, an urban planner and architect in Mexico City, says that Ciudad Neza, home to 1.2 million people, should serve as a model for other blighted urban areas and slums. Short for Nezahualcoyotl, Neza sits on the bed of Lake Texcoco which was slowly drained in a bid to combat devastating flooding over a century and more. However the dry land ended up being too salty for farming and was slowly picked up by developers who laid out a grid of streets and sold off boxy parcels, most without proper titles.

The settlement really grew in a burst of urban migration in the mid-20th century when new arrivals to Neza set up shacks of wood and cardboard, living without electricity, a sewage system or running water, schools or paved roads. Old timers remember in the early days they'd be lucky if a bus came every two hours. Victoria Gomez Calderon, 82, moved to Neza from eastern Mexico as a young woman, and remembers clearly the putrid remains of the lake just a half block from her tiny home. "It was a pure wasteland," she said.

In the early 1970s, residents banded together to demand services and a government program to formalize ownership and provide land titles. Neza's reputation as the world's largest slum, coined when its population was combined with two other blighted areas decades ago, no longer applies, they said. Today, despite its severe problems from continuing poor access to transport and schools to high crime rates, Neza's development holds lessons in growth and resilience for others. Planner Castillo says Neza is teeming with micro entrepreneurs working from home or sharing spaces in what would be called co-working in trendier places. "My argument is let's stop asking what urban planning can do to fix the city and let's focus on understanding where we could also learn from those processes," he said. "There's a strong sense of pride in place. It's a community based on the notion that jointly these people transformed this territory."

Priscilla Connolly Dietrichsen, a professor of urban sociology at the Universidad AutÛnoma Metropolitana in Mexico City, agrees. "The story isn't, 'Oh dear, dear, what a terrible slum.' In a way, it's a success story, in spite of the present problems," she said.

Slums are Cities
The 23-page draft document up for adoption at Habitat III in Quito is the result of months of closed-door negotiations, held in several nations, including Indonesia and the United States. Some critics are disappointed the policy framework contains no tangible targets and will be non-binding on member states. "It's easy for governments to sign something that is not enforceable," said Michael Cohen, a former senior urban affairs official with the World Bank, who has advised UN Habitat. "It doesn't have much bite. It talks a lot about commitments but has no dates, places or numbers."

Supporters, however, argue the New Urban Agenda will not only focus attention on the urgent need for holistic planning of cities but also work to fundamentally change the way urban growth is debated and discussed both nationally and globally. Important drivers of planned growth are a well-oiled system of land ownership, title and tenure which then paves the way for governments to collect revenue to pay for new services.

Equally important is the need for concerted planning approaches so new hospitals, bus services, and schools are placed where they are needed with thought given to future growth and employment opportunities. There has, however, also been some criticism of the UN's shift from a traditionally rural focus to a city driven, urban one and its failure to link the New Urban Agenda to the UN's Sustainable Development Goals and climate change benchmarks. —Reuters