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EXPLANATORY NOTES

The designations employed and the presentation of the material in the *World Drug Report* do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Countries and areas are referred to by the names that were in official use at the time the relevant data were collected.

Since there is some scientific and legal ambiguity about the distinctions between “drug use”, “drug misuse” and “drug abuse”, the neutral term “drug use” is used in the *World Drug Report*. The term “misuse” is used only to denote the non-medical use of prescription drugs.

All uses of the word “drug” and the term “drug use” in the *World Drug Report* refer to substances controlled under the international drug control conventions, and their non-medical use.

All analysis contained in the *World Drug Report* is based on the official data submitted by Member States to the UNODC through the annual report questionnaire unless indicated otherwise.

The data on population used in the *World Drug Report* are taken from: *World Population Prospects: The 2019 Revision* (United Nations, Department of Economic and Social Affairs, Population Division). References to dollars ($) are to United States dollars, unless otherwise stated.

References to tons are to metric tons, unless otherwise stated.

The following abbreviations have been used in the present booklet:

- **AIDS** acquirned immunodeficiency syndrome
- **ATS** amphetamine-type stimulants
- **EMCDDA** European Monitoring Centre for Drugs and Drug Addiction
- **FARC** Revolutionary Armed Forces of Colombia
- **ha** hectares
- **HIV** human immunodeficiency virus
- **INCB** International Narcotics Control Board
- **INTERPOL** International Criminal Police Organization
- **OECD** Organisation for Economic Co-operation and Development
- **REDD+** UN Programme on Reducing Emissions from Deforestation and Forest Degradation
- **S-DDD** defined daily doses for statistical purposes
- **UNDP** United Nations Development Programme
- **UNODC** United Nations Office on Drugs and Crime
- **UNESCO** United Nations Educational, Scientific and Cultural Organization
- **WHO** World Health Organization
Alternative development is aimed at addressing income- and non-income-related multidimensional poverty and the lack of livelihood opportunities, which are among the root causes of illicit drug crop cultivation. The Political Declaration and Plan of Action on International Cooperation towards an Integrated and Balanced Strategy to Counter the World Drug Problem of 2009, along with the United Nations Guiding Principles on Alternative Development of 2013, the outcome document of the special session of the General Assembly, held in 2016, and the Ministerial Declaration on Strengthening Our Actions at the National, Regional and International Levels to Accelerate the Implementation of Our Joint Commitments to Address and Counter the World Drug Problem of 2019, have placed alternative development high on the global agenda as a development-oriented drug control strategy.

Measuring the impact of alternative development is challenging. Having recognized this fact, many Member States sought to ensure that, in the 2009 Plan of Action, the recommendations relating to narcotic drugs and psychotropic substances and on alternative development reflected the importance of assessing the impacts of alternative development not only on the basis of illicit crop estimates but also on the basis of human development indicators. The extent of the area under illicit crop cultivation does not in itself reflect the sustainability of development efforts and is not a sufficient indicator for assessing the success of alternative development interventions. Experience has shown that short-term reductions in illicit crop cultivation can be quickly reversed, or cultivation can be displaced to other locations, if interventions have not addressed the root causes of illicit crop cultivation and provided sustainable solutions.

Evaluations of alternative development interventions have largely relied on post-project implementation reviews and not on rigorous impact assessments with pre- and post-intervention analysis. Member States have concurred that more efforts are required to improve the impact assessments of alternative development projects with a view to strengthen the evidence base and further increase the effectiveness of projects.

**FIG. 1** Theory of change in alternative development

**Source:** *World Drug Report 2015* (United Nations publication, Sales No. E.15.XI.6).


74 Outcome document of the thirtieth special session of the General Assembly, entitled “Our joint commitment to effectively addressing and countering the world drug problem” (General Assembly resolution S-30/1, annex).
An earlier analysis\(^75\) by UNODC highlighted that alternative development interventions, if well designed, can help to address some of the underlying factors and root causes of illicit crop cultivation and can ultimately result in a sustainable reduction in illicit crop cultivation in targeted regions through integrated rural development. The analysis showed that success in alternative development does not come quickly, as it is dependent on long-term investments that enhance human development, gender equality and women’s empowerment, land governance, security, the rule of law, institutional presence and environmental management and sustainability.

Other post-intervention analyses have been critical of the effectiveness of alternative development projects,\(^76\) while others have been more optimistic and have explained further the potential drivers of illicit crop cultivation and changes due to alternative development projects on the basis of theoretical economic frameworks.\(^77\) Understanding the drivers of illicit crop cultivation remains at the core of the design of evidence-based alternative development projects and policies. These drivers continue to be multifaceted and can differ depending on national and local circumstances.

**Factors influencing illicit crop cultivation**

**Development gaps are the main factors associated with illicit crop cultivation**

Annual surveys of rural communities in Afghanistan and Myanmar\(^78\) have shown that villages affected by illicit opium cultivation have a lower level of

\(^{75}\) Ibid.


\(^{77}\) Victoria A. Greenfield and others, *Reducing the Cultivation of Opium Poppies in Southern Afghanistan* (Santa Monica, California, RAND Corporation, 2015).

\(^{78}\) For example, UNODC annual socioeconomic reports on Afghanistan and Myanmar.
several of the multidimensional criteria for sustainable development (constituting what is referred to here as a development gap) than villages not affected by such cultivation. Analysed through the lens of the Sustainable Development Goals, the comparison of villages affected and not affected by illicit opium cultivation suggests that different development factors drive farmers to engage in illicit cultivation. For example, in 2017, in Afghanistan, the development gap was particularly acute with regard to the Sustainable Development Goals related to security and access to health and education services, while in Myanmar (Shan State) it was mostly associated with the Sustainable Development Goals related to infrastructure and natural resources. In the same year, in Colombia, a comparison among 6,000 households, located in 12 departments of the country, showed that households cultivating coca had less access to public services such as electricity and drinking water than households not cultivating coca. The development gap and inequality of opportunities differ not only between countries but also between specific locations within a country; for example, in 2017, in North Shan State in Myanmar, they were largely related to water, sanitation and energy, while in South Shan State, to deteriorating natural resources. Therefore, generalizations about the drivers of illicit cultivation and the specific gaps and inequalities of opportunities that alternative development may be aimed at reducing could be deceptive.

**Drivers of illicit crop cultivation are dynamic and cannot be explained by income alone**

Development gaps can result in unequal opportunities to access basic services required for individuals to sustain and improve their livelihoods, including when the gaps relate to income disparities, and they can drive different livelihood options (e.g., illicit crop cultivation). However, illicit crop cultivation is not always explained in terms of income differences. Sometimes there are no large differences, or it is even the case that higher income is reported in villages affected by illicit crop cultivation (although overall income levels remain mostly low in both types of communities), as profits derived from illicit crops can be used to temporarily escape poverty or to compensate for additional expenses associated with the remoteness of the villages affected by illicit crop cultivation. There are several factors that determine choices about cultivation, including security...
Female-headed households and illicit crop cultivation

Information about the participation of women in illicit crop cultivation is scarce, and even more so on female-headed households. A baseline survey in 2017 covering 16,100 households in 15 provinces in Afghanistan indicated that female-headed households were less prone to be involved in opium poppy cultivation than male-headed households, as, in that country, the cultivation of cash crops in general is typically a male activity, whereas women are usually in charge of animal husbandry and poultry.

Overall, female-headed households were in a critical condition, characterized by lower annual earnings (up to 40 per cent less) than male-headed households. Female-headed households were also found to have lower food security, a lower degree of trust and confidence in national authorities, and a higher number of household members in search of employment. The survey findings suggested that, in general, female-headed households were more distressed by the conflict in Afghanistan than male-headed households.

and governance issues, but also deeper socioeconomic disadvantages. In Myanmar, for example, further analysis of the economic data indicates that farmers in villages involved in illicit crop cultivation earn slightly higher income but have significantly smaller formal or informal savings than similar farmers in villages not involved in illicit crop cultivation due to greater living expenditure (for example, a lack of schools or markets in the village, which results in greater transport costs). However, a similar or higher level of income does not always fully offset the higher costs of living in those villages.83

The drivers of illicit drug cultivation are dynamic and can change a farmer’s attitude to illicit cultivation over time. For example, in Afghanistan it was observed that, during a five-year period, some farmers cultivated illicit crops every year, some did so intermittently (from two to four times) and others only once, while others were new to illicit cultivation or had re-initiated it after a long-term break.84 The dynamic, versatile and context-specific nature of the drivers of illicit cultivation prevent the development of prescriptive solutions for successful alternative development programmes. What is clear is that, for an alternative development intervention to be effective, it must address the long-term root causes of the development gap, which may be related to farmers’ livelihoods, households’ vulnerability to re-impoverishment, and to security and governance.85

Source: UNODC, needs assessment and baseline report of the Boost Alternative Development Interventions through Licit Livelihoods and the Community-based Agriculture and Rural Development East and West alternative development projects in Afghanistan (2017).

83 UNODC and Myanmar, Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar.
84 UNODC and Afghanistan, Sustainable Development in an Opium Production Environment.
85 World Drug Report 2015; UNODC and Afghanistan, Sustainable Development in an Opium Production Environment; and UNODC and Myanmar, Evidence for Enhancing Resilience to Opium Poppy Cultivation in Shan State, Myanmar.
Contribution of alternative development to female income in Afghanistan

In Afghanistan, the Government, together with non-governmental organizations, is currently implementing with UNODC support a unique alternative development project for the period 2017–2021 in 13 provinces that focuses strongly on increasing female income. In doing so, the project is contributing to peace and stability, which are significantly associated with the reduction of illicit crop cultivation. The project involves the initiation or strengthening of dairy and poultry production, vegetable cultivation and orchard activities, with a view to primarily enhancing female income, which usually only constitutes 5 to 10 per cent of total household income.

The mid-term evaluation of the project, carried out in 2019, based on surveys of more than 4,000 households in 220 villages, indicated that, in comparison with the baseline in 2017, the number of households with female members who generated income had increased from 21 to 29 per cent, as had income earned by women, by as much as 10 per cent.

Source: UNODC, mid-term impact assessment of the Boost Alternative Development Interventions through Licit Livelihoods alternative development project in Afghanistan (2020).

FIG. 5  Number of alternative development projects, by country and year, 2013–2017

Note: N = 53. The numbers between brackets refer to the total number of projects under implementation each year.

Overview of alternative development projects in the period 2013–2017

In 2019, UNODC undertook a study to collect information on the characteristics of alternative development projects in terms of individual budgets, main objectives, geographical coverage, duration and implementing partners at the global level, with the aim of understanding the scale of implementation of these projects.

The analysis represented one of the first efforts to collect and systematize information on the status of alternative development projects worldwide. It covered a total of 53 identified alternative development projects that had been under implementation during the period 2013–2017 in the countries where most opium poppy is cultivated (Afghanistan, Myanmar and Mexico) and those where most coca

86 The analysis considers as an “alternative development” project those aimed at improving the quality of life of farmers and reduce or prevent the cultivation of illicit drug crops. For simplification purposes, project also refers to programme in the analysis.

87 In the case of Mexico, projects conducted in regions affected by opium poppy cultivation did not explicitly include the double objective of improving the quality of life of farm-
is cultivated (Colombia, Peru and the Plurinational State of Bolivia). These countries together accounted for 98 per cent or more of the global cultivation of opium poppy and coca in 2017,\textsuperscript{88} the last year covered in the study.\textsuperscript{89}

**Small increase in the total annual budget of alternative development projects worldwide driven by projects in Colombia**

The aggregated annual budget for all the alternative development projects identified experienced a small but gradual increase over the period 2013–2017, from $190 million to $275 million. That was mainly due to projects in Colombia, which more than doubled their total annual budgets, from a combined total of $75 million in 2013 to $154 million in 2017. The growth was related to increased interest in funding alternative development projects following the peace agreement concluded with the Revolutionary Armed Forces of Colombia (FARC) in 2016, which included commitments towards the voluntary cessation of illicit crop cultivation and the implementation of social inclusion and development projects. One of the largest alternative development projects, the National Comprehensive Programme for the Substitution of Illicit Crops (Plan Nacional Integral de Sustitución de Cultivos de Uso Ilícito), is funded by the Government of Colombia.

The total annual budget of projects in the Plurinational State of Bolivia was also increased thanks to funds provided by the European Union for two projects on integrated development with coca, one of which started in 2014 and the other in 2016. In Afghanistan and Myanmar, the total annual budget for alternative development projects remained in the same range over the period 2013–2017 (i.e., $77 million to $100 million in Afghanistan and $3.4 million to $5.6 million in Myanmar). By contrast, funding for alternative development efforts in Peru decreased from $34 million in 2013 to $26 million in 2017 as a result of a decrease in the number of projects.

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\textsuperscript{88} World Drug Report 2019 (United Nations publication, Sales No. E.19.XI.9).

\textsuperscript{89} This analysis is based on an extensive review of data and reports gathered from websites, supported by e-mail communications and field visits to the offices of the main international donors located in each of the six countries mentioned.
Most funding went to long-term alternative development projects

Alternative development projects promote intricate processes of behavioural change (e.g., farmers’ voluntary decisions to cease illicit crop cultivation) that require long-term and continuous investment. A budget analysis of the projects that ended between 2013 and 2017 showed that most of the funds were spent on long-term projects. Out of a total budget of $469 million allocated to completed projects over the period 2013–2017, $382 million went to projects that lasted longer than six years, $81.3 million to projects that lasted four to six years and $5.7 million to projects of less than four years.

Duration of the majority of completed alternative development projects is too short for sustainable results

While the largest share of the total combined budget of the alternative development projects went to long-term projects, in terms of the number of projects, 47 per cent of those completed lasted between four and six years, and 12 per cent lasted less than four years, which is likely to be too short for sustainable results. The remaining 41 per cent of projects lasted from 6 to 10 years. For both short- and long-term alternative development projects, more efforts are required to provide systematic and comparable evidence of the sustainability of their effects on reducing and preventing illicit crop cultivation and community-based socioeconomic growth.
Impact assessments of alternative development interventions in Afghanistan

UNODC, in cooperation with the Government, is currently evaluating the impacts of three large-scale alternative development projects in Afghanistan (with total budgets of $20 million to $60 million each). The projects are being implemented by the Afghan Government, two of them jointly with UNDP and one with UNODC. The impact assessments are still ongoing and include the monitoring of a comprehensive set of more than 1,000 socioeconomic indicators and remote-sensing analyses of land cover of more than 530 villages in 15 provinces (bi-)annually (from before the projects began in 2017 until they end in 2022). To be able to isolate the effects of the projects from external factors, the impact assessments consider comparisons of both socioeconomic indicators and land cover changes before and after the implementation of the alternative development projects between villages that receive the interventions (referred to here as treatment villages) and similar villages that do not receive them because they are located outside the scope of the alternative development projects (referred to here as control villages). In this regard, control villages are key for obtaining robust impact evaluations.

For example, there was a significant reduction in opium poppy areas (depicted in pink in the maps below) in villages that received the alternative development interventions from 2017 to 2018. Nevertheless, a similar reduction was also observed in control villages. If the changes in opium poppy cultivation were purely due to the alternative development projects, then the outcome in the villages receiving the interventions would have been different than in the control villages. The comparison between treatment and control villages helped clarify that the changes in opium poppy cultivation in 2018 were mainly due to a drought, which affected both types of village. The final results of the impact assessments are expected to be available in 2022, once the alternative development projects have ended.

Source: UNODC, needs assessment and baseline report of the Boost Alternative Development Interventions through Licit Livelihoods and Community-based Agriculture and Rural Development East and West alternative development projects (2017); and UNODC, mid-term impact assessments of the Community-based Agriculture and Rural Development East and West (2019).

Note: “Treatment villages” are those villages currently receiving the alternative development interventions. “Control villages” are similar villages that are currently not receiving such interventions because they are outside the current scope of the alternative development projects.
Alternative development efforts vary greatly between countries. The main stated purposes of the different alternative development projects, aside from reducing or eliminating illicit crop cultivation, varied by country. In Afghanistan, projects focused heavily on the introduction of high-value crops (90 per cent of the projects), in Myanmar, on food security (80 per cent), in the Plurinational State of Bolivia, on the social integration of native communities (70 per cent), in Colombia, on supporting government capacity, including territorial control (40 per cent), and in Peru, on the consolidation of farmers’

Non-governmental organizations are the main implementing partners in half of all alternative development projects

Alternative development projects were usually implemented by multiple partners, each responsible for specific parts of the interventions, for example, building infrastructure or providing training. Implementing partners either conducted the interventions themselves or hired or subcontracted other entities and organizations. In half of the alternative development projects, local non-governmental organizations or private organizations participated as implementing partners, mostly in projects with budgets between $20 million and $100 million, while UNODC was one of the implementing partners in a quarter of the projects, mostly those with individual budgets of less than $5 million. No detailed information was available about the amounts provided to individual implementing partners.

Key objectives of alternative development efforts vary greatly between countries

The main stated purposes of the different alternative development projects, aside from reducing or eliminating illicit crop cultivation, varied by country. In Afghanistan, projects focused heavily on the introduction of high-value crops (90 per cent of the projects), in Myanmar, on food security (80 per cent), in the Plurinational State of Bolivia, on the social integration of native communities (70 per cent), in Colombia, on supporting government capacity, including territorial control (40 per cent), and in Peru, on the consolidation of farmers’

FIG. 9 Number of alternative development projects, by main objective and country, 2013–2017


Notes: N = 53. The main objectives are those as stated in the project documents and are not mutually exclusive. The numbers refer to the number of projects for each stated main objective. The projects had one or more main objectives.
Estimates of the number of households cultivating illicit crops worldwide

Reliable estimates of the total extent of illicit crop areas are available from annual remote-sensing evaluations carried out by UNODC together with the countries where most opium poppy is cultivated (Afghanistan, Mexico and Myanmar), and where most coca is cultivated (Plurinational State of Bolivia, Colombia and Peru). However, one of the most persistent gaps in the decision-making process has been the lack of systematic information about the global number of households cultivating illicit crops.

Households may cultivate just one plot or several small or large plots of illicit crops; some locations with large total illicit crop areas may have a relatively small number of such households, while others may have a large number. Therefore, the total extent of illicit crop areas does not alone provide an indication of the number of households growing illicit crops.

On the basis of a methodology that combines data from remote sensing, socioeconomic surveys and agricultural censuses, the number of households cultivating coca bush was estimated to range between 280,000 and 370,000, while those cultivating opium poppy was estimated at between 325,000 and 600,000, resulting in an estimate of 605,000 to 970,000 households cultivating illicit crops in the six countries most affected by coca bush and opium poppy cultivation worldwide.

Any attempt to quantify the extent of the involvement of households in illicit cultivation needs to acknowledge the diversity of rural life. For example, farmers may decide which legal crops to cultivate based on the size and quality of their land, but they may also base their decisions on external factors such as crop prices at the local market. Many households in rural areas also earn income from non-agricultural activities such as wage labour on construction sites. Such issues may explain fluctuations in household income from year to year and affect wider household decisions. As a result of these processes, data on the number of households cultivating illicit crops can be highly dynamic over time, especially in the case of an annual crop such as opium poppy.

Number of households cultivating illicit crops

Source: UNODC, estimates made in 2019 of the number of households cultivating illicit crops worldwide.

Note: based on data on the Andean countries (Plurinational State of Bolivia, Colombia and Peru) and Mexico for 2017, and on Afghanistan and Myanmar for 2018. The research on the number of households cultivating illicit crops was financially supported by Germany (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ).
been covered by alternative development interventions, even though investing there could potentially pay off by preventing the expansion of illicit crop cultivation. Ideally, such interventions, mostly focused on prevention, would also include comprehensive impact assessments in order to provide strong evidence of their effectiveness.

Difficult to assess the number of households targeted by alternative development projects

Reliable evidence on the number of households actually targeted by alternative development initiatives remains scarce. Very few projects conducted baseline and endline surveys or maintained reliable, continuous tracking of project activities and results. By contrast, information was generally provided about the total number of households to be targeted by the different projects, but aggregating that information was complicated. Some projects were not clear about the intended target group; in other cases, the scope of the project was broad and also included households that would indirectly benefit. Some of the projects did not specify the number of target households because they targeted aggregated units such as schools, local community boards or cooperatives. Taking into account these limitations, the best estimate for the number of households intended to be targeted by alternative development interventions in 2017 was 550,000. This estimate includes households cultivating and households not cultivating illicit crops, as alternative development projects are generally aimed at providing benefits to both types of household to avoid the risk of creating “perverse incentives” (i.e., an increase in illicit crop cultivation by households not previously cultivating illicit crops in an attempt to also benefit from alternative developments interventions).

Gradual shift away from focusing mainly on high-value crops

Although the introduction of high-value crops was one of the most common main objectives identified in alternative development projects, despite differences among countries, the main focus of such projects overall has shifted over time. While several projects that started in the period 2013–2014 focused on the introduction of high-value crops, that objective was slightly less common in the period 2016–2017. Moreover, some of the most recently initiated alternative development projects are aimed at addressing environmental issues, for example, deforestation and forest degradation, in order to access funding linked to climate change, land use management and natural resource conservation, particularly in Colombia.

Areas with low but sharply increasing levels of illicit crop cultivation are being overlooked

Alternative development projects in Afghanistan and Myanmar tended to be carried out in areas (provinces or states) with traditionally high levels of illicit crop cultivation. However, illicit crop cultivation has recently started to emerge, in some cases at a steady pace, in non-traditional locations such as Jowzjan Province in Afghanistan and Chin State in Myanmar. These emerging cultivation locations have not yet