



CEDRIG  
Light

## Cambodian Horticulture Project Advancing Income and Nutrition (CHAIN) phase 3

—  
Moritz Krüger  
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Agencia Suiza para el Desarrollo  
y la Cooperación COSUDE

## ● Resumen

### Información general

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<b>Objetivo general</b>	Promotion of horticulture value chains in Preah Vihear, Stung Treng, Kratie and Oddar Meanchey provinces, with a strong focus on women and delivering sustainable income growth and improved household food security and resilience
<b>País</b>	Camboya
<b>Presupuesto</b>	CHF 1.900.000
<b>Duración</b>	01.01.2021 - 31.12.2022

### Resumen

<b>Descripción</b>	In Cambodia, more than 20 % of the rural poor suffer from food insecurity. The increasing market demand for safe vegetable and fruits provides a huge opportunity for small holder farmers and processors, in particular women to increase income and food security. The Cambodia Horticulture Advancing Income and Nutrition (CHAIN) project supports farmers in increasing sustainable production, income and resilience in four of the poorest provinces of Cambodia - Kratie, Stung Treng, Preah Vihear and Oddar Mancheay. With the particular focus on the fruits and vegetables sector, CHAIN tackles market system constraints to improve the service delivery to poor farmers households, women headed households and ethnic minorities. CHAIN will support smallholder farmers to diversify into growing fruit and vegetables through the introduction of smart horticultural techniques ,water saving , and market linkages required to generate much-needed additional income, and it will also address poor household nutrition by introducing diversification of diets.
<b>Términos clave</b>	agriculture and food security

### Sectores de Intervención

Agricultura	Seguridad alimentaria
Desarrollo rural	Gestión del agua
Otros	Vegetables Production
Marketing	

## Documentos

Climate Change Impact Lower Mekong Basin (pdf, 3.65 MB)

## Imágenes



Open home garden in Kratie province

Open home garden in Kratie province



Farmers group planning

Farmers group planning



Round Year vegetables production in Plastic Net

Round Year vegetables production in Plastic Net

## ○ Perspectiva del riesgo

### Amenazas que se producen debido a la degradación del medioambiente

Nombre de la amenaza	Deforestación								
Exposición	Sí								
Comentarios	Massive deforestation in Cambodia is highly likely to be the root cause of the devastating change in the observed rainfall pattern. It is caused by legal (attribution of land concession to foreign companies, building of roads in forested area, etc...) and illegal logging.								
Consecuencia	<p><b>Alteration of hydrological cycle and micro-climate, reduced water availability</b></p> <p>The changed hydrological cycle has increased the frequency of both floods and droughts.</p> <table border="1"> <tbody> <tr> <td>Probabilidad</td> <td>Alcance</td> <td>Importancia del riesgo</td> </tr> <tr> <td>Muy probable</td> <td>Sumamente perjudicial</td> <td>Riesgo alto</td> </tr> </tbody> </table>			Probabilidad	Alcance	Importancia del riesgo	Muy probable	Sumamente perjudicial	Riesgo alto
Probabilidad	Alcance	Importancia del riesgo							
Muy probable	Sumamente perjudicial	Riesgo alto							
Nombre de la amenaza	Plagas y epidemias								
Exposición	Sí								
Comentarios	locust, rats, flea beetle larvae								
Consecuencia	<p><b>loss of income and crop production</b></p> <p>Invasion of flea beetle larvae (Chrysomelidae: Alticini), which leads to a severe destruction of vegetables, especially root and leaf vegetables. Occurrence increased in the past 3-4 years.</p> <table border="1"> <tbody> <tr> <td>Probabilidad</td> <td>Alcance</td> <td>Importancia del riesgo</td> </tr> <tr> <td>Probable</td> <td>Perjudicial</td> <td>Riesgo medio</td> </tr> </tbody> </table>			Probabilidad	Alcance	Importancia del riesgo	Probable	Perjudicial	Riesgo medio
Probabilidad	Alcance	Importancia del riesgo							
Probable	Perjudicial	Riesgo medio							
Nombre de la amenaza	Contaminación del agua (superficiales y subterráneas)								
Exposición	Sí								
Comentarios	In 2018, warm army destroyed over than 10,000 ha of corn plantation. Water pollution is concern recently in Cambodia								

## Consecuencia

**loss of fishery resources and income**

Seasonal, severe invasion of Mekong river by a fist-thick layer of algae/aquatic plants which completely disrupt the normal fishing activities. This phenomenon started recently (around 2010-2012) and is observed in its maximum extension since a couple of years only.

Probabilidad  
Probable

Alcance  
Perjudicial

Importancia del riesgo  
Riesgo medio

## Amenazas naturales (hidrometeorológicas y geológicas)

## Nombre de la amenaza

**Olas de calor**

Exposición Sí

## Comentarios

Heat wave in 2016 destroyed many plots of vegetables farms . In 2016, People have to buy drinking water, the prices of water has almost three times increased

## Consecuencia

**higher freshwater demand for people and livestock. The level of water in many rivers are very low**

People and animal get sick . Farmers earned less income

Probabilidad  
Probable

Alcance  
Ligeramente perjudicial

Importancia del riesgo  
Riesgo bajo

## Consecuencia

**slower and reduced labour work**

Probabilidad  
Probable

Alcance  
Ligeramente perjudicial

Importancia del riesgo  
Riesgo bajo

## Consecuencia

**Heatstroke in particular for elderly and children**

Probabilidad  
Probable

Alcance  
Perjudicial

Importancia del riesgo  
Riesgo medio

## Nombre de la amenaza

**Sequias**

Exposición Sí

**Comentarios** In 2019 and 2020, most of water ponds were dried up, water level in many river are very low in historical and ground water level are dept. Deforestation reduce groundwater recharge, and increase evaporation and water demand during dry/hot season.

**Consecuencia** **reduced water availability**

Reduced water availability for household consumption and agriculture, particularly of paddy rice, cassava, rubber, and maize.

**Probabilidad**

Muy probable

**Alcance**

Perjudicial

**Importancia del riesgo**

Riesgo alto

**Consecuencia** **loss of crop production & income**

Partially severe economic losses (also due to the lack of business continuity planning) for rice and vegetable farmers. Households with limited to no savings are left to buy seeds for next season or drinking water. Impacts from strong droughts may be felt for up to 2 years. As a result of low coping mechanisms, some communities may not recover from such loss.

**Probabilidad**

Muy probable

**Alcance**

Perjudicial

**Importancia del riesgo**

Riesgo alto

**Consecuencia** **long-term immigration**

migration occurs in various forms, both part-time and permanently, to urban areas, neighbouring countries or provinces

**Probabilidad**

Probable

**Alcance**

Sumamente perjudicial

**Importancia del riesgo**

Riesgo alto

**Nombre de la amenaza** **Crecidas repentinas, inundaciones**

**Exposición** Sí

**Comentarios** Flash flood in 2019, have destroyed some houses and many vegetables farms were washed away. Dam broken in Laos in 2018 destroyed hundreds of houses in two provinces. Many people were evacuated.

**Consecuencia** **loss of crop production & income**

Long-lasting episodes with too much rain cause rotting of rice plants & vegetables during rainy season. The existing drainage and irrigation practices used by communities are largely insufficient to ensure the survival of crops and seeds during and after intense rain episodes followed by severe droughts.

**Probabilidad**

**Alcance**

**Importancia del riesgo**

	Muy probable	Perjudicial	Riesgo alto
Consecuencia	<b>destruction of houses &amp; infrastructure, disruption of market access</b>		
	Probabilidad Muy probable	Alcance Perjudicial	Importancia del riesgo Riesgo alto

Nombre de la amenaza **Tormentas, tornados y/o huracanes, vientos fuertes, tormentas de arena**

Exposición Sí

Comentarios Seasonal storms and strong winds destroyed over than 1000 houses and thousands of trees. Lightening killed animals and people

Consecuencia	<b>Damage to houses and buildings.</b>		
	Destruction of light agricultural infrastructure (bamboo scaffolding, nets etc.), damage to houses and critical roads/bridges. Storms and strong winds are observed more frequently in past years. Impacts are rather local.		
	Probabilidad Probable	Alcance Ligeramente perjudicial	Importancia del riesgo Riesgo bajo

## Amenazas que se producen debido al cambio climático (y la variabilidad del clima)

Nombre de la amenaza **Tendencia general al aumento o disminución de la temperatura media**

Exposición No está claro

Comentarios higher mean annual temperature +5-10% (rel. term)

Consecuencia	<b>higher water demand for people, livestock and agriculture</b>		
	Probabilidad Probable	Alcance Perjudicial	Importancia del riesgo Riesgo medio
Consecuencia	<b>decrease of crop productivity</b>		
	Decrease in suitability in the production of paddy rice, (++) cassava (++) , soya (+), maize (+), rubber (+), and in livestock rearing (+).		
	Probabilidad Probable	Alcance Perjudicial	Importancia del riesgo Riesgo medio

Consecuencia

**diminishing of groundwater resources**

Probabilidad  
Muy probable

Alcance  
Perjudicial

Importancia del riesgo  
Riesgo alto

Nombre de la amenaza

Cambios de frecuencia e intensidad de los fenómenos climáticos extremos y desastres relacionados (p.ej. olas de frío y calor, inundaciones, sequías, tormentas, huracanes, ciclones)

Exposición

Sí

Comentarios

higher frequency and unpredictability of high rainfall events

Consecuencia

**loss of crop production due to non-timely sowing and planting (traditional knowledge is no longer applicable)**

Probabilidad  
Probable

Alcance  
Sumamente perjudicial

Importancia del riesgo  
Riesgo alto

Consecuencia

**Higher irregularity of the rainy season**

Earlier onset of the hot season and prolonged duration. Shortened rainy season. A new sequence of flood-drought-flood episodes is observed during the rainy season: flood episode in June-July (too much rain) followed by drought in August (no rain at all), immediately followed by flood situation Aug-Sept (too much rain). This lead to higher demand for adequate early warning systems. Rain was delayed in 2019 and 2020, started only in mid of June.

Probabilidad  
Probable

Alcance  
Sumamente perjudicial

Importancia del riesgo  
Riesgo alto

## ¿Evaluación detallada de riesgos necesaria?

Sí - Es necesaria una evaluación detallada de riesgos



## ● Perspectiva del impacto

### Calcule el impacto en el medioambiente

Área medioambiental	Agua
Componente de la actividad	Capacity building of farmers and processors for increased sustainable production, including year-round production and performance
Impacto sobre el medioambiente	Higher agricultural performance and year-round production will increase the demand for water resources.

### Estime el impacto en los riesgos de desastres

Componente de la actividad	Improved income and productivity of smallholder horticulture
Nuevo riesgo o riesgo agravado	More cycles of horticulture production may put pressure on the already stressed water resources in some places even more in some places. An integrated water resources management, based on surface & groundwater is needed, not to exacerbate the risk of future droughts.

### Calcule el impacto en el cambio climático

Componente de la actividad	None
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### ¿Evaluación detallada de los impactos necesaria?

Sí - Es necesaria una evaluación detallada de los impactos