



CEDRIG
Opérationnel

Cambodian Horticulture Project Advancing Income and Nutrition (CHAIN) Phase I

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● Vue d'ensemble

Informations Générales

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| Objectif général | 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 |
| Pays | Cambodge |
| Budget | CHF 4.000.000 |
| Durée de l'activité | 01.12.2014 - 30.11.2017 (Phase I) |

Sommaire

Description In Cambodia, more than 40 % of the rural poor suffer from food insecurity. The increasing market demand for 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 and processors 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 modern horticultural techniques and market linkages required to generate much-needed additional income, and it will also address poor household nutrition by supporting a diversification of diets.

Termes clés agriculture and food security

Secteurs d'intervention

Agriculture

Sécurité alimentaire

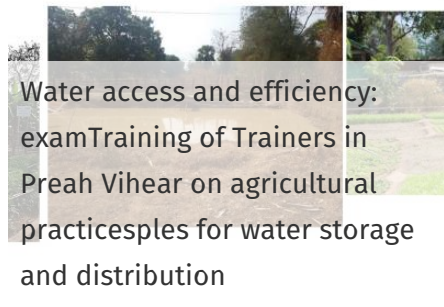
Documents

Cliamte Change Impact and Adaptation Lower Mekong Basin (pdf, 3.65 Mo)

DRR Introductory presentation at SDC DRR Workshop, 23.08.2016 in Phnom Penh (pdf, 1.48 Mo)

Images

Water access and efficiency



Water access and efficiency: Training of Trainers in Preah Vihear on agricultural practices for water storage and distribution



Training of Trainers in Preah Vihear on agricultural practices



Training of Trainers in Kratie on agricultural practices



Army worm outbreak in Preah Vihear

○ Perspective des risques

Aléas dûs à la dégradation de l'environnement

Nom de l'aléa **Nuisibles et épidémies**

Conséquence **Loss of income and crop production**

The invasion of flea beetle larvae (Chrysomelidae: Alticini) leads to a severe destruction of vegetables, especially root and leaf vegetables. Flea beetles execute their most severe attacks during dry weather and are most active on sunny days. Occurrence increased in the past 3-4 years.

> **Risque sélectionné**

Gravité

Probabilité

Importance

Nuisible

Probable

Risque moyen

Vulnérabilités

Increased pressure on smallholder farmers and income, loss in crop and vegetable production, low means of savings, limited knowledge of mitigation measures.

Mesure potentielle

Training of trainers and smallholder farmer groups on Integrated Pest Management (IPM), validated IPM technologies and vegetable varieties.

Commentaires Smallholder farmers have poor knowledge of adequate and integrated pest control (biological, eco-friendly measures). Overuse of chemical pesticides is a risk.

> **Mesure sélectionnée**

Mesure potentielle

Promote policy development on (bio)pesticides and other applicable technologies.

Commentaires Training of trainers and workshops / policy advocacy on IPM regulations.

> **Mesure sélectionnée**

Aléas naturels (hydro-météorologiques et géologiques)

Nom de l'aléa **Inondations**

Conséquence **Destruction of crops and vegetables, loss of income**

Weather patterns are increasingly unpredictable: increased heavy rainfall, flooding, unpredictable start of the rainy season. 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. No sufficient early warning system is in place, neither for households nor for the agricultural sector. Current weather forecasts and traditional knowledge have proven inaccurate and unreliable.

> Risque sélectionné

Gravité

Probabilité

Importance

Nuisible

Très probable

Risque élevé

Vulnérabilités

Communities' coping mechanisms are overwhelmed. Frequent (often annual) and often complete loss of crop production.

Mesure potentielle

Implement a flood early warning system (EWS)

Commentaires Installation of automated river gauges and design of a mobile-phone early warning system (sms, voice message) freely and publicly accessible, in cooperation with national/provincial authorities.

> **Mesure sélectionnée**

Mesure potentielle

Improve drainage capacities in high flood risk areas

Commentaires Communities lack technical knowledge and financial resources to develop adequate and efficient irrigation and drainage systems. Highly localized variations in exact needs. Responsibility is with the Provincial authorities (PDWRAM).

Mesure potentielle

Adaptation of agricultural practices at farmers level

Commentaires Raised vegetable beds, improved access to water (wells, ponds, climate-smart technologies incl. pumps, rainwater harvesting), mulching, early maturing varieties, protected nurseries.

> **Mesure sélectionnée**

Nom de l'aléa

Sécheresses

Conséquence

Destruction of crops and vegetables, loss of income

Higher irregularity of the rainy/dry seasons: earlier onset of the hot season, prolonged duration of the dry season, and shortened rainy season.

> Risque sélectionné

Gravité

Probabilité

Importance

Très nuisible

Très probable

Risque élevé

Vulnérabilités Communities' coping mechanisms are overwhelmed. Loss of crop production due to disruption of the traditional planting-replanting-harvesting cycle. Traditional knowledge is no longer applicable.

Mesure potentielle

Training to smallholder farmers and vegetables farmer groups on climate-smart technologies and DRR

Commentaires Identify suitable solutions & technologies on water access, storage and distribution according to local conditions (farmers' needs, retailers, soil and geology). Train farmers on suitable technologies and agricultural practices adapted to a changing climate, e.g. mulching, irrigation, water-efficient crops, wind erosion, solar coverage, seed variety demonstrations, seeds/crops more resistant to floods and droughts.

> **Mesure sélectionnée**

Mesure potentielle

Risk transfer mechanisms

Commentaires Some farmer groups have saving components. Small to medium insurance businesses are entering Northern Cambodia only slowly due to little economic interest (yet).

Conséquence **Long-term lack of water availability**

Water scarcity and droughts are relatively new in the project area (tropical Aw climate). Water resources are used without regulation. Available water resources are inadequately monitored or unknown. Groundwater levels are declining at an estimated rate of 20cm/year, but no consistent water resources monitoring is in place.

> **Risque sélectionné**

Gravité

Très nuisible

Probabilité

Probable

Importance

Risque élevé

Vulnérabilités

Agricultural sector and smallholder farmers are already not prepared to droughts or water scarcity. Further water usage by the growing agricultural sector will put more pressure on water resources and aggravate the situation.

Mesure potentielle

Implement a groundwater monitoring and drought warning system

Commentaires Installation of groundwater monitoring gauges, and develop drought trigger points. Provide warnings and recommendations on timely planting and harvesting to agricultural actors according to current/projected water availability.

> **Mesure sélectionnée**

Mesure potentielle

Develop an Integrated Water Resources Management (IWRM)

Commentaires Training IWRM principles & give recommendations to various provincial authorities on watershed development planning, aquifer characteristics and recharge and maximum water abstraction rates.

> Mesure

sélectionnée

Aléas dûs aux changements climatiques (et à la variabilité du climat)

○ Perspective des impacts

Impacts sur l'environnement

Élément du projet **Commercial and homestead producers and processors increase productivity (incl. year-round production)**

Impact négatif potentiel Increased use of chemical fertilizers and pesticides

Importance Farmers struggle to manage insect infestations and often rely on chemical pesticides. Lack of knowledge and wrong perceptions about pesticides, underestimation of the health risks and easy access to illegal and hazardous chemical pesticides persist. Enforcement of pesticide regulations is still expected weak.

> Impact sélectionné

Mesure potentielle

Promote the use of organic fertilizers and pesticides, etc., and judicious use of chemicals when no other solutions are available.

> Mesure sélectionnée

Impact négatif potentiel Increased use of (ground)water resources

Importance Water is the mayor obstacle to produce more cycles of crops and to intensify production. Access to water and the use of appropriate water storage and distribution technologies are critical to commercial vegetable farming, as it allows farmers to continue production at times of high demand and higher prices.

> Impact sélectionné

Mesure potentielle

Market-based introduction of drought-resistant crop varieties and technologies to increase water use efficiency

Commentaires Promote water access (wells, ponds, pumps, rainwater harvesting), increase crop per drop by mulching, drought resistant varieties, and collaborate with private sector to develop a market-system for affordable water solutions.

> Mesure sélectionnée