

# パラグアイ国 安全で環境に優しい微生物製剤による 化学薬剤耐性ボウフラ対策と蚊媒介感染症予防の案件化調査 株式会社 九州メディカル(福岡県北九州市)





## パラグアイ国保健分野における開発ニーズ(課題)

- ・保健主要指標が中南米・カリブ諸国で最も低い水準にある
- ・感染症有病率(デング熱など)と関連死亡率の高さ(デング熱では常に上位10%にランク)
- ・ボウフラが薬剤耐性を持ってきたため、これまでの蚊媒介感染症対策(散布薬剤)の変更が急務

# 提案製品·技術

- ・微生物由来のタンパク質を殺虫成分とするボウフラ殺虫剤 (MOSNON TB)
- ・化学製剤耐性を持つボウフラに有効で新たな耐性がつきにくい
- ・環境負荷が少なく、ボウフラ以外の水生生物に対する毒性が 非常に低い

### 本事業の内容

- 契約期間:2020年1月~2021年8月
- 対象国・地域:パラグアイ国(アスンシオン首都圏・セントラル県・カアグアス県・アルトパラナ県)
- 案件概要:

提案製品の有効性、優位性を確認し、提案するODA事業内容の計画を作成し、その協力について関係行政機関(カウンターパート候補)から合意を得る。同時に、提案法人のパラグアイ国および中南米ビジネスの事業計画を作成するため、現地企業や周辺国でのビジネス展開に必要な情報収集を行う。





MOSNON TB (ボウフラ殺虫剤・微生物製剤)

### 開発ニーズ(課題)へのアプローチ方法(ビジネスモデル)

- ・販売代理店を通じた提案製品の販売
- ・主な顧客はパラグアイ国の感染症対策管轄機関(厚生福祉省・国立感染症撲滅サービス局: SENEPA)
- 関係機関と協力した、効果的な散布計画の作成と実施支援
- ・パラグアイ国での製造拠点確保による競争力強化とメルコスール加盟国への域内輸出によるビジネス継続性の強化

# 対象国に対し見込まれる成果(開発効果)

- 保健主要指標の改善
- ・現在使われている化学製剤に耐性を持つボウフラ対策が進むことによる感染率の低下
- ・蚊媒介感染症の予防対策の効果的な実施
- ・感染率低下による医療費の抑制



SDGs Business Model Formulation Survey with the Private Sector for Controlling Insecticide-Resistant Mosquito Larvae and Mosquito-Borne Diseases by Introducing Eco-Friendly Bio-Larvicide in Paraguay Kyushu Medical Co., Ltd. (Kurume-City, Fukuoka Prefecture, Japan)





#### **Development Issues Concerned in Health Sector**

- •Multiple health indicators show Paraguay as one of the lowest in Latin America and the Caribbean
- •The dengue fever incidence rate has been considerably high (in the top 10 in the region for the last 10 years)
- •Insecticide (Temephos\*)-resistant mosquito larvae reported, and alternatives policies and measures in urgent need (\* Procurement banned by US EPA)

## **Products of the Company: MOSNON TB for Paraguay**

- Eco-friendly bio-larvicide with Bacillus thuringiensis israelensis (Bti), present naturally that produces delta-endotoxin (insecticidal protein), as the active ingredients.
- Valid only for larvae while not harmful to people, pets and other animals, aquatic life, or other insects
- ·Far less larvicide-resistance

# Survey Outline

- Survey Duration: Jan. 2020 Aug. 2021
- Country/Area: Paraguay, including Greater Asunción, Central Department, Alto Paraná Department, Caaguazú Department and other neighboring areas
- Name of Counterpart: Ministry of Public Health and Social Welfare (Expected)
- Survey Overview: To gather information on the suitability and applicability of the biolarvicide product as one of the solutions for dengue control in Paraguay by meeting with relevant key players; to obtain concurrence from the relevant partners on a new project plan utilizing the bio-larvicide as an Official Development Assistance project; and to collect information on possible local partner companies for creating a regional business plan in Paraguay and Latin America



MOSNON TB, Eco-Friendly Bio-Larvicide

#### Approach to the Development Issues/ Business Model

- Selling a bio-larvicide product via a local distributor with a track record of successful business
- Collaborating with relevant Paraguayan partners for creating an application plan and assisting in the execution
- The primary customer expected: SENEPA of MSPBS
- Increasing the competitiveness by local manufacturing, and the business sustainability by exporting to neighboring countries

## **Expected Impact in Paraguay**

- •To improve the health indicators
- •To potentially lower the dengue fever incidence by promoting the application of MOSNON TB, specifically as a solution to Temephos-resistant mosquito larvae, currently popular in the region
- •To contribute to lowering the financial burden, especially on a resource-limited population, with the lowered incidence rate