



Two S Pharma Sole Co.,Ltd



ADAPTING SOLUTION FOR THE 21<sup>ST</sup> CENTURY

DENGUE FEVER 2021/ 2022

DECONOP – Dengue Economic Protection

DECOLOP – Dengue Ecologic Protection

## INTRODUCTION

In view of societal disruption due to a raise in infectious disease, and in consideration with the buying power minimum average of 2 third of the planet population, 2SPHARMA intend to promote a range of products and solutions directly sourced from the Lao PDR for the overseas markets.

2SPHARMA has an experience record of identifying and efficiently acting on Dengue cases in the habitable zone known as the Equatorial belt, which is now under the pressure of Regional weather shift due to Climate Change widening the reproduction of Mosquitoes colonies exposing further more Society to outbreak of transmissible disease.

This document is to propose and implement a prevention mechanism for the Economic safety of Dengue Fever impact DECONOP (Dengue Economic Protection) and to address the need for Dengue Ecological prevention DECOLOP (Dengue Ecologic Protection) during the ongoing Climatic, Geostatic and Epidemiologic disruption.

2SPHARMA with the supports of its ecosystem of partners such as PDC PHARMACEUTICAL FACTORY<sup>3</sup> Lao PDR, DEEPBLUE SMARHOUSE, and active partners in Africa, India, Mid East, South & Central America and Oceania, propose turn key solution from the diversified and alternative community worldwide. We are sincerely looking forward to work with you. The proposal include 3 main services:

- 1/ basic needs/ access to preventive and supportive products (Serum, Dietetic,...).
- 2/ basic services/ the development of local task force to tackle salubrity issues.
- 3/ infrastructures/ transportable field hospital, pharmaceutical factoring.

*(see presentation attachment in annexes)*

## **PREVENTION, the key to Economic and Ecologic Protection.**

### **Pricing/**

All pricing are made in accordance with the buying power of developing Nation, thus aligning with Continental Africa, South America and Asia actual and real economic environment.

*(sample price list of Goods & Services attach)*

### **Distribution/**

Fortunately, the planetary logistic system have grown to such extends that medical products and medical equipment can travel across the globe and be delivered in the best timing and best conditioning facilitating access to remote location.

*(consult 2SPHARMA)*

### **Sustainability/**

Of course continuity is an issue, 2SPHARMA is able to follow up and provide with both, the distribution of it's basic goods and services as well as promoting local R&D focus on primordial solution to answer future basic needs.

*(2SPHARMA turnkey solutions)*

### **Production/**

Reliable manufacturer have been identified over the year, and 2SPHARMA is able to produce quality products and goods following international standard quality and protocol.

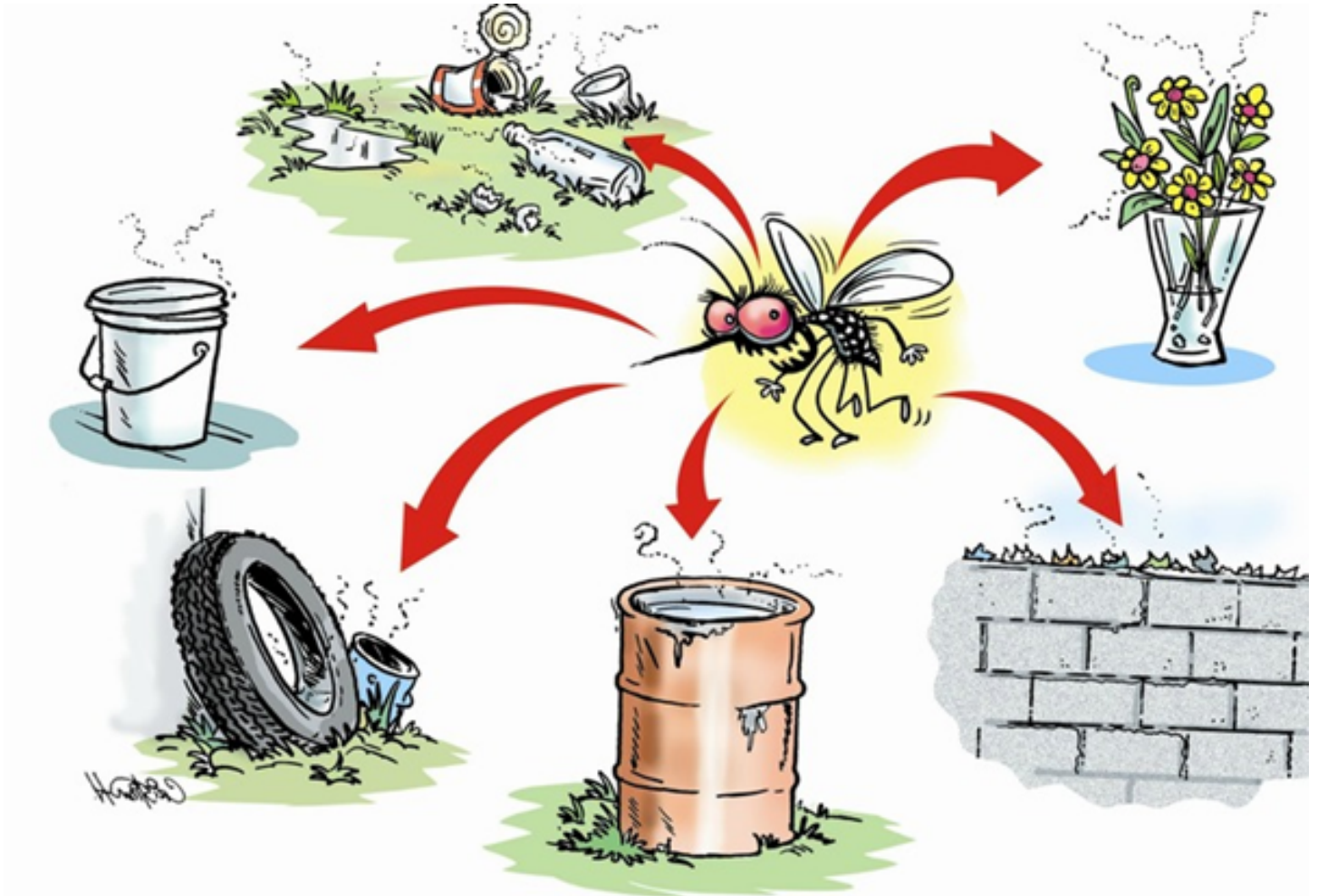
*(2SPHARMA quality/efficiency)*

### **Accessibility**

The main concern and relevant problematic to address "it is not because goods and products exist that the general population have access to it", from environmental cause to political outcomes, 2SPHARMA intend to promote a fair and sustainable access to its Goods, Products and Services.

*(consult 2SPHARMA)*

DENGUE HAVE AFFECTED 400 MILLION PEOPLE WORLDWIDE IN 2020



2SPHARMA IS PROPOSING ADAPTATIVE SOLUTION FOR THE DEVELOPING WORLD

## DENGUE – Description

### Dengue

A viral infection caused by four types of viruses (DENV-1, DENV-2, DENV-3, DENV-4) belonging to the Flaviviridae family. The viruses are transmitted through the bite of infected *Aedes aegypti* and *Aedes albopictus* female mosquitoes that feed both indoors and outdoors during the daytime (from dawn to dusk). These mosquitoes thrive in areas with standing water, including puddles, water tanks, containers and old tires. Lack of reliable sanitation and regular garbage collection also contribute to the spread of the mosquitoes.

### Risks

Risk of Dengue exists in tropical and subtropical areas of Central America, South America, Africa, Asia, and Oceania. All travellers are at risk during outbreaks. Long-term travellers and humanitarian workers going to areas where Dengue is endemic are at higher risk. Dengue occurs in urban and suburban settings with higher transmission rates happening during the rainy season.

### Symptoms

In some cases, Dengue infection is asymptomatic – persons do not exhibit symptoms. Those with symptoms get ill between 4 to 7 days after the bite. The infection is characterized by flu-like symptoms which include a sudden high fever coming in separate waves, pain behind the eyes, muscle, joint, and bone pain, severe headache, and a skin rash with red spots. Treatment includes supportive care of symptoms. There is no antiviral treatment available.

The illness may progress to Dengue Hemorrhagic Fever (DHF). Symptoms include severe abdominal pain, vomiting, diarrhea, convulsions, bruising, and uncontrolled bleeding. High fever can last from 2 to 7 days. Complications can lead to circulatory system failure and shock, and can be fatal (also known as Dengue Shock Syndrome).

*//Ref/If you are infected with the same Dengue virus serotype you become immune to future infections. However, if you are infected subsequently with a different serotype, immunity wanes over time which increases the risk of developing Dengue Hemorrhagic Fever./*

*(reference list on request)*

## BACKGROUND

Dengue fever is a rapidly growing public health problem in many parts of the tropics and sub-tropics in the world. While there are existing studies on the economic burden of dengue fever in some of dengue-endemic countries, cost components are often not standardized, making cross-country comparisons challenging. Furthermore, no such studies have been available in Africa, South America or Oceania.

## Methods/Principal findings

A patient-specific survey questionnaire was developed and applied in Burkina Faso, Kenya, and Cambodia in a standardized format. Multiple interviews were carried out in order to capture the entire cost incurred during the period of dengue illness. Both private (patient's out-of-pocket) and public (non-private) expenditure were accessed to understand how the economic burden of dengue is distributed between private and non-private payers.

A substantial number of dengue-confirmed patients were identified in all three countries: 414 in Burkina Faso, 149 in Kenya, and 254 in Cambodia. The average cost of illness for dengue fever was \$26 (95% CI \$23-\$29) and \$134 (95% CI \$119-\$152) per inpatient in Burkina Faso and Cambodia, respectively. In the case of outpatients, the average economic burden per episode was \$13 (95% CI \$23-\$29) in Burkina Faso and \$23 (95% CI \$19-\$28) in Kenya. Compared to Cambodia, public contributions were trivial in Burkina Faso and Kenya, reflecting that a majority of medical costs had to be directly borne by patients in the two countries.

**2SPHARMA intent to provide with a consumer friendly service and an affordable cost.**

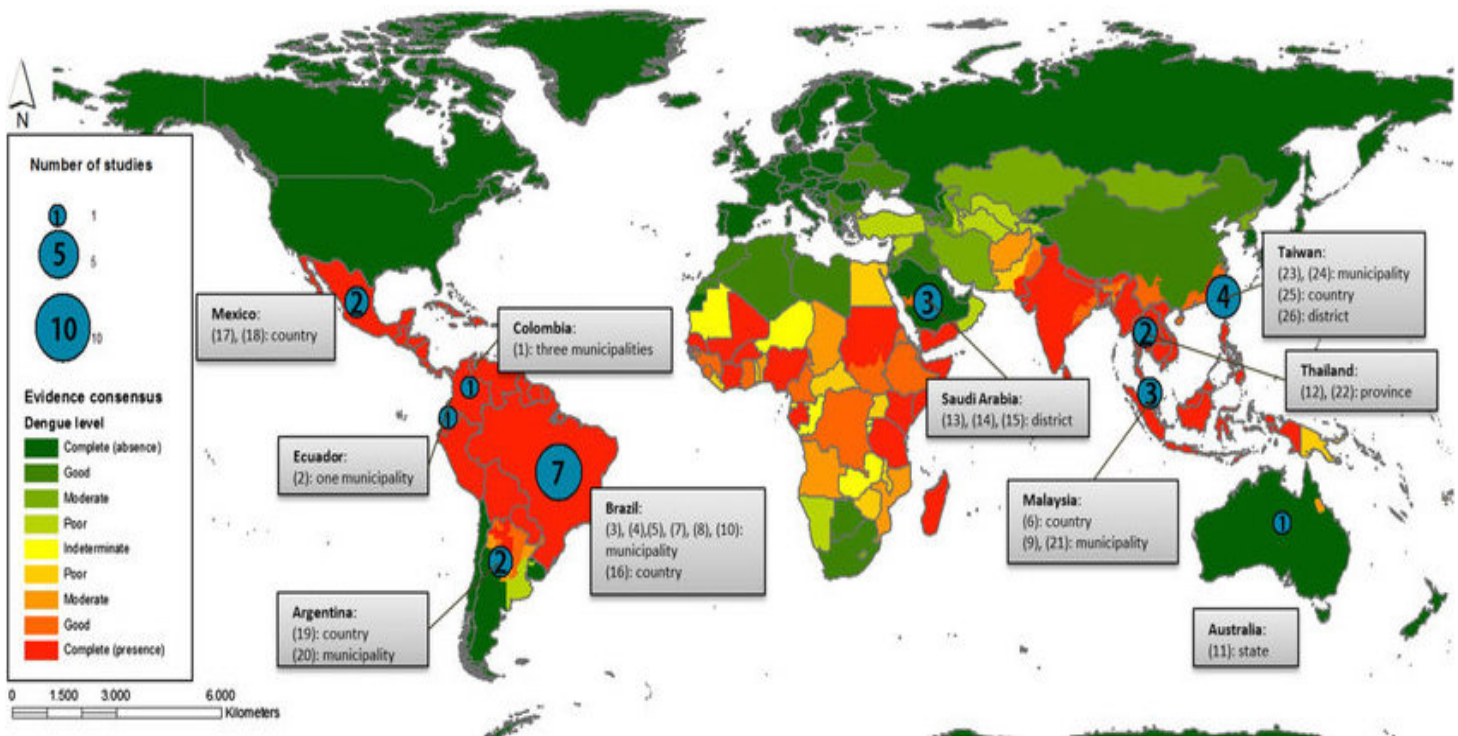
**SERUMU is to be made available following average buying Local power, not by Economic Region.**

*/Conclusions/Significance/The cost of illness for dengue fever is significant in the three countries. In particular, the current study sheds light on the potential economic burden of the disease in Burkina Faso and Kenya where existing evidence is sparse in the context of dengue fever, and underscores the need to achieve Universal Health Coverage. Given the availability of the current (CYD-TDV) and second-generation dengue vaccines in the near future, our study outcomes can be used to guide decision makers in setting health policy priorities.//*

*(see SERUMU presentation)*

## PREVENTION OF OUTBREAK. 'the game is on'.

**DECONOP & DECOLOP** prime target is to stabilize the endemy at 400 million case, avoid positively to break the Half Billion case. Dengue has emerged in recent decades as a worldwide public health problem, particularly in the Asia-Pacific and Americas-Caribbean regions. In Africa, the epidemiology and public health effect of dengue is not clear. *Aedes* spp. mosquitoes are widely distributed worldwide and can serve as vectors of dengue virus (DENV). When their distribution is combined with rapid population growth, unplanned urbanization, and increased international travel, extensive transmission of DENV is likely in Africa, South & Central America, Mid East & Oceania.



Over the past 5 decades, cases of epidemic or sporadic dengue have been reported in many countries in sub-Saharan Africa. Although sporadic cases of dengue hemorrhagic fever (DHF) have been reported in a few countries in Africa, no outbreaks have been reported. However, when compared with the Asia-Pacific and Americas-Caribbean regions, the epidemiology and effect of dengue in Africa has not been defined.

//Example/ A dengue outbreak in Cape Verde was recently reported (>3,000 cases), and the reappearance of dengue in Senegal after 20 years was also reported. To estimate the extent of DENV infection and dengue in Africa, S&C America MEast and Oceania, we reviewed published literature and other sources for reports of this disease in persons living in or traveling to this region.//

## **PREVENTION - Methodology and implementation.**

DECONOP & DECOLOP promote safeguards and prevention to adapt to the condition of the 21<sup>st</sup> Century. The proposal is based on less investments (\$1.8 billion/year over the last 30 years), to fight uncontrollable circumstances and increase financing of adaptive long term solutions on Individual cares and Collective Salubrity..

Dengue Economic Protection, DECONOP.

### **HUMAN FOCUS.**

Prevention is the primordial aspect of the 21<sup>st</sup> Century, Individual Hygiene, Infrastructure Salubrity & Urban Sanitary needs our urgent attention with decisive and strong actions to be implemented in the best timing.

Dengue is in line with repetitive outbreak which are now reaching population until now outside of the Climate periphery of the Tropical area and Equatorial belt allowing the development of Mosquitoes colonies, this due to a Planet Earth population over passing 8 Billion Human in less than a decade and severe effects of an ongoing Climate Change. A reminder that Biology have a strong respond mechanism, when a living entity feel in danger it react. And so goes the same with Virus & Microbes adapting along our efforts to survive.

Dengue Ecologic Protection, DECOLOP.

### **INFRASTRUCTURE FOCUS**

Pollution is to be address directly with DECOLOP, an Ecologic program base on Prevention and develop for each geo-location following the latest data's of regional and continental climate shift, very unfortunately the over use of pesticides and agro-antibiotics over the last 50 years had both the effect of weakening human defenses but augmented the resistance in Mosquitoes colonies concluding in the present situation.

2SPHARMA, a Lao PDR base Health and Wellness consumer goods with a focus on developing Nation, have identify and is able to produce the quality and quantity required by the ongoing demands. From Serum for treatment to Preventive Dietetic products and PPE's (Insectifuges, protection nets, Essential Oil incents, etc) in line with Developing Nation individual buying power, a very important aspect of this proposal. We offer quality and quantity with a focus on Economic impact. The 2 variants are direct loss of economic revenues (individual) and the slowdown in productivity (Regional).

*COMMERCIAL PARTNERSHIP/ 2SPHARMA provide a sustainable and affordable solution for long term association in the domain of Public Health & Wellness and Livelihood Prevention.*



## 2SPHARMA CONSUMER GOODS & SERVICES DESCRIPTION

In line with modern protocol and product development, 2SPHARMA promote collaboration among the actors in the field of prevention and emergency solution to the economic sector of developing Nations with cost effective and reliable solutions.

### **For individual/**

The use of Natural biologic boost/ ECONOMIC PREVENTION

Promote natural immuno-protection to strengthen economic viability: work absence does not only contribute to lost of individual jobs, it accentuate the slow down in Regional economic viability, DECONOP intent to prevent from unnecessary slow down, Individual Hygiene by supplementing with artisanal made dietary product provide the best Cost/Effectiveness results.

*(prepared Dietetic booster, juices, teas, energy bars,... see sample attach)*

### **For Communities/**

The use of SERUMU for support period/ ECONOMIC PROTECTION

When an outbreak occur in a Community it can paralyze entire Human Ecosystems, to recover in the best timing is a must. Dengue fever have a way to knock you down and the need for a Bio-Booster is a must. SERUMU, with a medium term conservancy (60 month) SERUMU is a made product for overseas markets affected by Dengue outbreak. It facilitate recovery and support the Patient during the fever phase, allowing for a better and quick recovery.

*(exhaustive list of market demand per Continent attach)*

### **For Outbreak Emergency/**

The use of Removable/Transportable field hospital.

Developed in association with a reliable prefabricated building manufacturer and fitted for rapid and effective responds, these infrastructure are fast becoming the winning choice to tackle endemics.

*(see field hospital presentation)*

## 2SPHARMA DIETARY GOODS & DIETETIC PRODUCTS

**Artisanal processed goods for Dengue fever prevention/ Immunity boosting foods.**

### Citrus

Citrus foods are rich in vitamin C which helps in building strong immunity. Vitamin C helps in the production of white blood cells which are the disease-fighting cells of the body. These foods are also loaded with antioxidants which protect the body from damage from free radicals.

*(citrus foods supplements such as energy bars production can be augmented according to demand.)*



### Garlic

Garlic adds a strong taste to the food. It is a part of almost every Indian kitchen. Garlic can also contribute to better immunity. It can help in fighting infections. Garlic has antibacterial and anti-fungal properties as well. The presence of sulfur in garlic contributes to better immunity.

*(Garlic can add flavor as well as improve immunity, Lao PDR can source with multiple variety of Artisanal process Garlic product, Dry, Fried, Powder, Jam,...)*



### Ginger

Ginger has a strong flavor which is used to add flavor to teas. Ginger is also an immunity-boosting food. Ginger is very helpful in treating sore throat, inflammation, nausea and other symptoms of dengue fever, 2SPHARMA is sourcing Ginger Artisanal made product from Lao PDR.

*(Ginger is widely use in Lao PDR, and goods such as Ginger Sweet, Ginger Tea, Dry Ginger are Artisanal produce and suitable for exports).*



*(ARTISANAL PROCESSED CONSUMER GOODS. The demand for consumer goods Artisanal process following modern environment of safety protocols is growing worldwide.)*

2SPHARMA INTRA & INFRA SOLUTIONS (non exhaustive list)

INSECTIFUGES – Artisanal production



**SERUM Universal – SERUMU/** Dengue, hemorrhagic fever.  
(see presentation page)  
**SERUM Chirurgical – SERUMC/** Surgery, post natal complication.  
(see presentation page)

**DIETETIC – Artisanal goods/** Energy bars & Natural booster.  
**EX:**  
Citrus Energy bars                      Papaya Leave concentrate



INFRASTRUCTURE – Transportable/Modulable Field Hospital/ 10 to 500 Beds capacity.

The proposal includes a turn key solution/ from 10 beds to 500 beds// Fully transportable and erectable at will. This solution provide with a better cost/efficiency than container or tents, its adaptability to any terrain is out-competing traditional hospital structures.



| LAYOUT AND EQUIPMENT LIST |                  |      |      |                                  |      |
|---------------------------|------------------|------|------|----------------------------------|------|
| Code                      | Department       | Unit | Code | Department                       | Unit |
| E01                       | Operating Room   | 1    | C02  | Pharmacy                         | 1    |
| E02                       | ICU              | 1    | C03  | Radiology                        | 1    |
| TL01                      | Patient Ward     | 3    | C04  | Toilet and Bath Unit             | 5    |
| TL02                      | Refectory        | 2    | C05  | Storage and Transport            | 5    |
| TL03                      | Staff Ward       | 2    | C06  | Power Supply                     | 1    |
| T02                       | Patient Transfer | 1    | C07  | Fresh Water and Waste Water Unit | 1    |
| T03                       | Triage           | 1    | C08  | Laundry                          | 1    |
| T04                       | Doctor Room      | 1    | C09  | Kitchen Unit (Cooking)           | 1    |
| C01                       | Laboratory       | 1    | C10  | Sterilization                    | 1    |

(for inquiries see contact page)

PRICING/ *(average/TBC)*

SERUMU

SERUM U – DENGUE  
WITH PERFUSION KIT/  
CIF WORLDWIDE – BOX OF 20 PATCH/500ml  
\$180.00 equivalent to 1 OR 2 INDIVIDUAL TREATMENT/

DIETETIC GOODS

CONCENTRATE/SUPPLEMENTS/ENERGY BARS  
CIF WORLDWIDE –  
CONCENTRATE/from \$100/L  
SUPPLEMENTS/from \$100/Kg  
ENERGY BARS/from \$1000/100Kg

INSECTIFUGES

INCENTS/OILS/REPPELANT  
CIF WORLDWIDE – from:  
\$100/10Kg

INFRASTRUCTURES

10 to 500 BEDS TURN KEY  
CIF WORLD WIDE – 2 options/

Off Grid –  
Ex: 50 beds \$2.8m

On Grid –  
Ex: 50 beds \$2.4m

*(free consultation)*

2SPHARMA IS READY TO ANSWER YOUR DEMANDS.

DETAILED PROPOSAL ON REQUESTS/

SCHEDULE PAYMENT – LC/

WE SERVICE PRIVATE & INSTITUTIONAL ORGANIZATION/

2SPHARMA EXPORT CIF – WORLDWIDE/

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