

ボリヴィア国 ベニ県地域保健医療システム強化計画調査 最終報告書 要約



平成15年2月

システム科学コンサルタンツ（株）

社調二

JR

03-37

本調査の最終報告書の構成は以下の通りである。

和文要約（本報告書）

SUMMARY

MAIN REPORT（APPENDIXES を含む）

ANNEXES (Annex 1 and 2)

- Annex 1 Questionnaire for Monitoring on Pilot Study, Result of Education/ Training for 2 Hospitals in Trinidad, Result of Education/ Training for 2 CSs and Medical Boat, Own Evaluation Report on Pilot Study
- Annex 2 Result of Water Quality Survey, Detail Data of Facilities and Medical Equipment on Pilot Study, Equipment List and Building Plans for the Improvement Project of Health/ Medical Facilities based upon the Master Plan

APPENDIXES はサポーティング資料として、また ANNEXES はデータ集として編集された。

外貨交換レート

US\$ 1.00 = Bs. 7.5 2003 年 1 月時点
(Main Report 12. Project Cost and Evaluation で適用)

US\$ 1.00 = 135 円 2002 年 1 月時点
(Main Report 11. Proposed Technical Cooperation で適用)

序文

日本国政府は、ボリヴィア共和国政府の要請に基づき、ベニ県地域保健医療システム強化計画に係る調査を実施することを決定し、国際協力事業団がこの調査を実施することと致しました。

当事業団は、平成 13 年 6 月から平成 15 年 2 月まで、システム科学コンサルタンツ株式会社 代表取締役社長の草野干夫を団長とし、同社から構成される調査団を 4 回にわたり現地へ派遣致しました。

調査団は、ボリヴィア共和国政府関係者と協議を行うとともに、ベニ県における現地調査を実施し、帰国後の国内作業を経て、ここに本報告書完成の運びとなりました。

この報告書が、ベニ県の保健医療システム強化の推進に寄与するとともに、両国の友好・親善の一層の発展に役立つことを願うものです。

終わりに、調査にご協力とご支援をいただいた関係者各位に対し、心より感謝申し上げます。

平成 15 年 2 月

国際協力事業団
総裁 川上隆朗

伝達状

国際協力事業団

総裁 川 上 隆 朗 殿

今般、「ボリヴィア国ベニ県地域保健医療システム強化計画調査」にかかる調査が終了しましたので、ここに最終報告書を提出いたします。

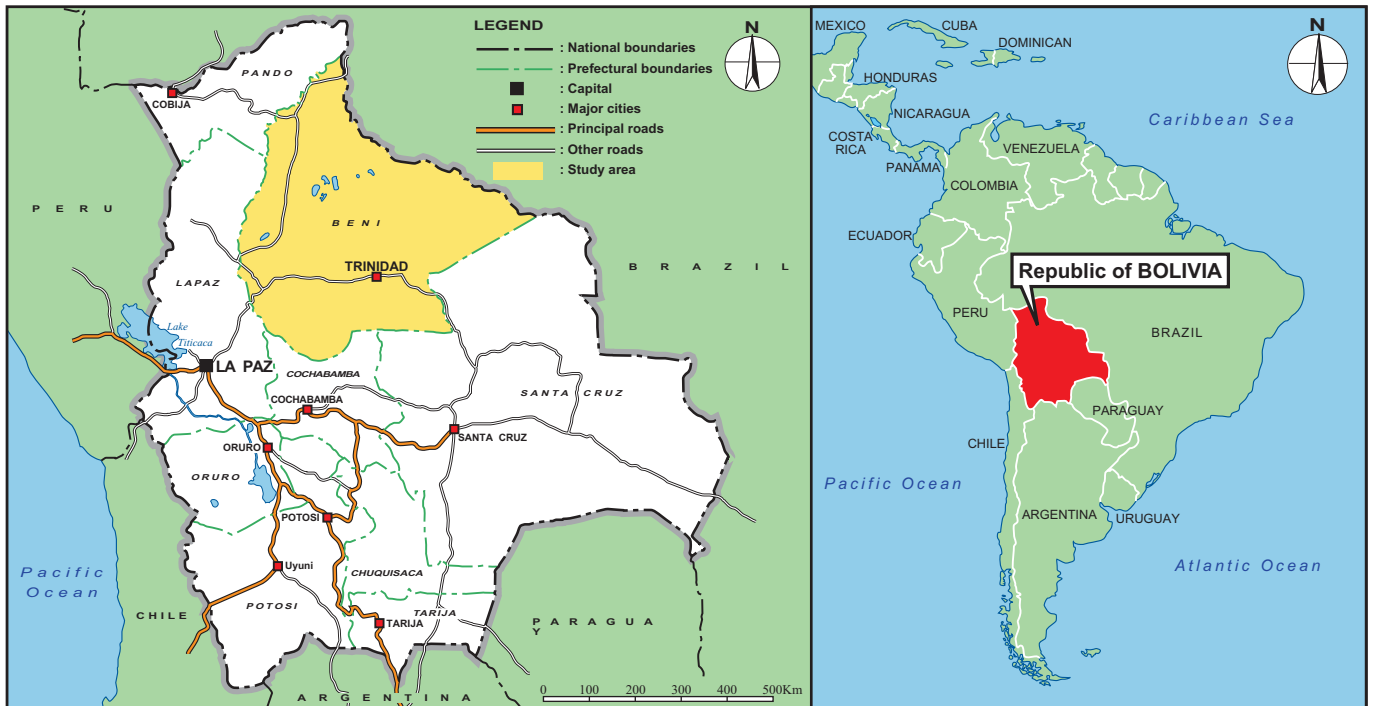
本報告書は、貴事業団との契約により、弊社が、平成 13 年 6 月より平成 15 年 2 月までの間に実施した内容を取りまとめたものです。この調査では、ベニ県における地域保健医療システムの現況と課題を明確にした上で、同県における地域保健医療システムのマスタープランを策定いたしました。

なお、同調査期間中、貴事業団をはじめ、外務省及び厚生労働省関係者には多大のご理解ならびにご協力を賜り、御礼申し上げます。また、ボリヴィア国においては、大蔵省対外経済公共投資局、保健年金省、ベニ県並びに関係自治体、在ボリヴィア国日本大使館及び貴事業団等関係者多数からの貴重な助言とご協力を賜ったことを付け加えさせていただきます。

貴事業団におかれましては、この報告書が計画推進に向けて大いに活用されることを切望いたします次第です。

平成 15 年 2 月

システム科学コンサルタンツ株式会社
ボリヴィア国ベニ県保健医療システム
強化計画調査
調査団長 草野干夫



MAP OF THE STUDY AREA



Figure: Location of Cities/ Communities with Health Facilities in Cercado Province
STUDY ON ENHANCEMENT OF DISTRICT HEALTH SYSTEM FOR BENI PREFECTURE IN THE REPUBLIC OF BOLIVIA





Figure: Location of Cities/ Communities with Health Facilities in Mamoré Province
STUDY ON ENHANCEMENT OF DISTRICT HEALTH SYSTEM FOR BENI PREFECTURE IN THE REPUBLIC OF BOLIVIA

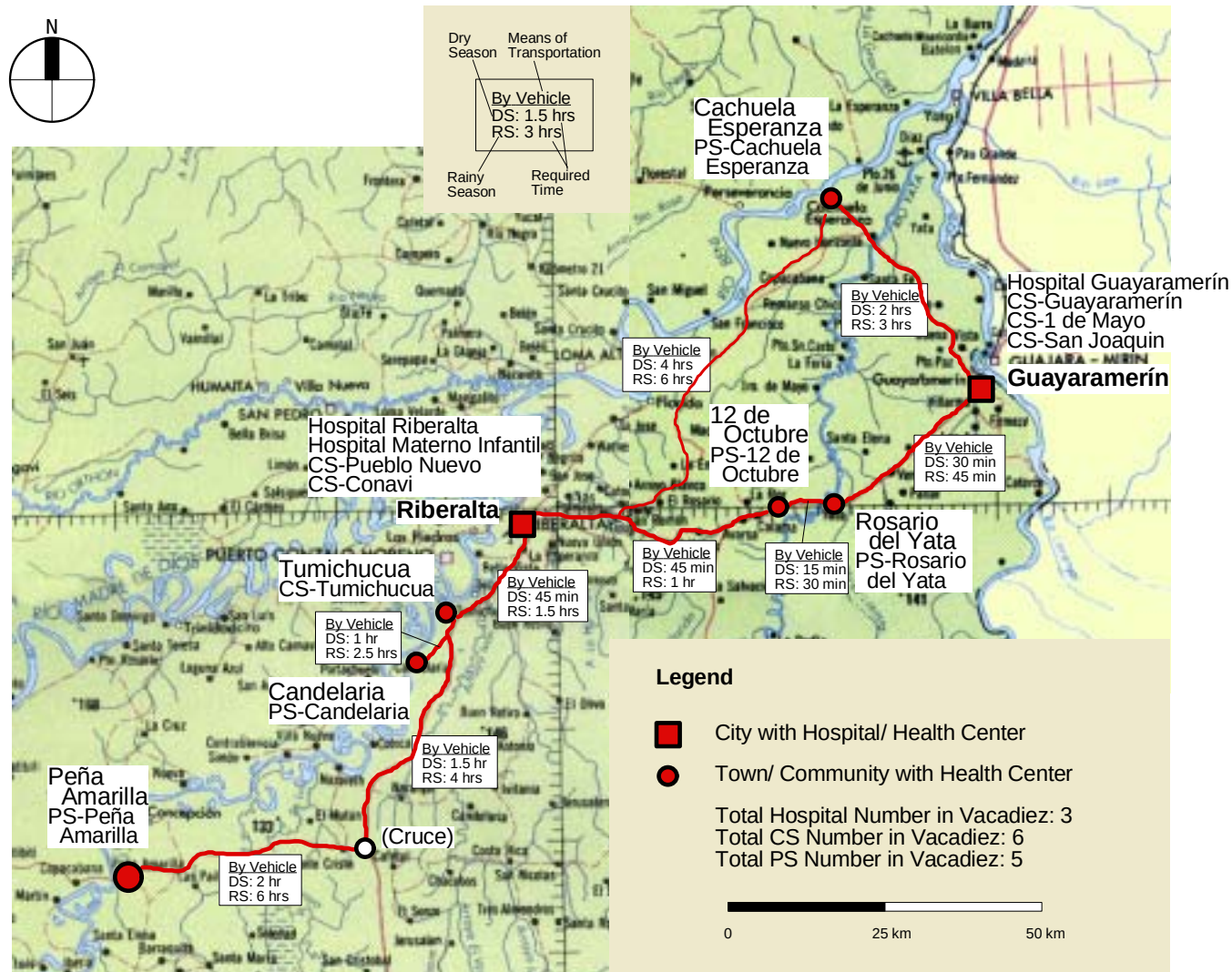
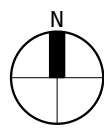


Figure: Location of Cities/ Communities with Health Facilities in Vacadiez Province
STUDY ON ENHANCEMENT OF DISTRICT HEALTH SYSTEM FOR BENI PREFECTURE IN THE REPUBLIC OF BOLIVIA

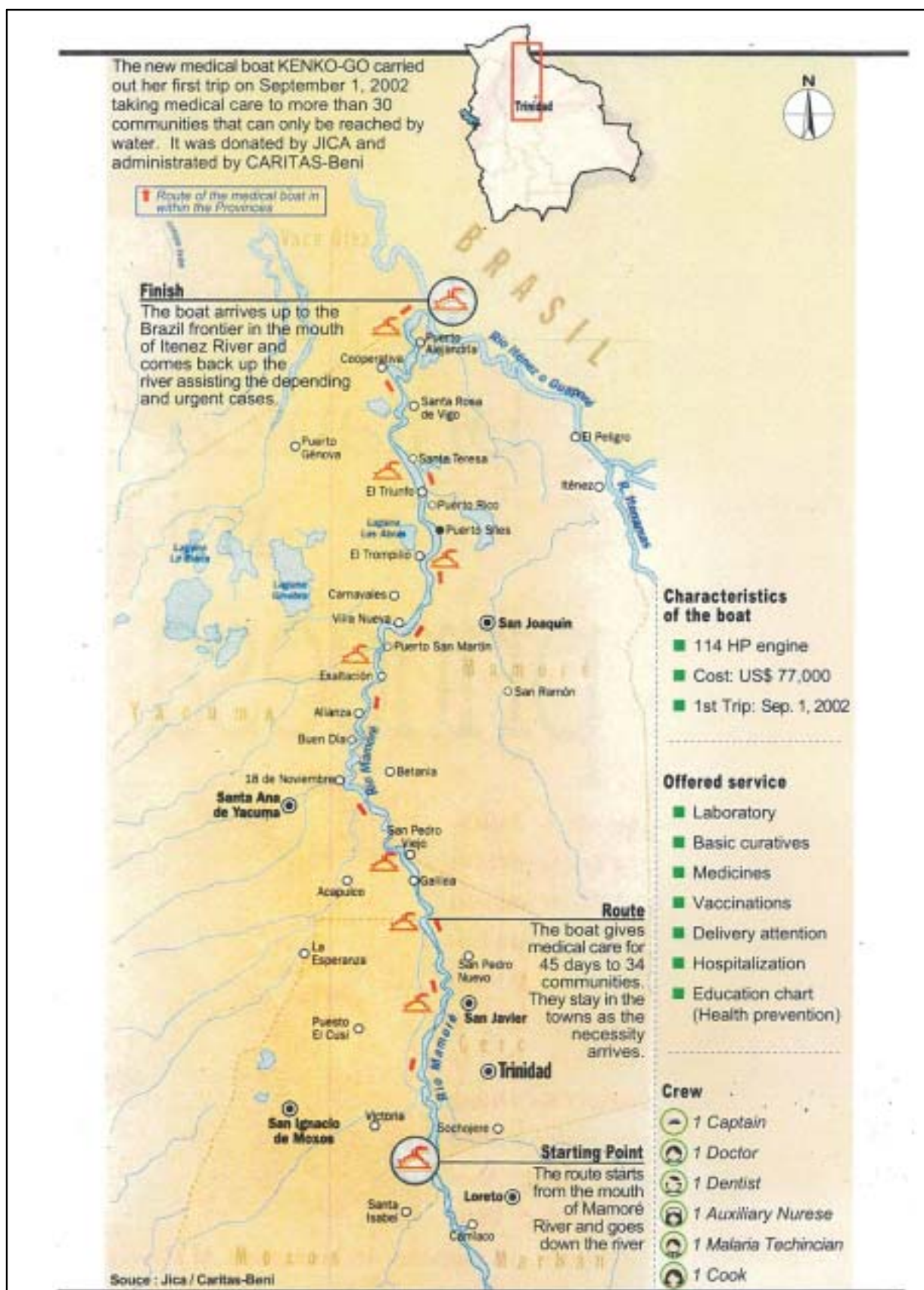


Figure: Navigation Route through the Amazon Area by Medical Boat (Pilot Study)
STUDY ON ENHANCEMENT OF DISTRICT HEALTH SYSTEM FOR BENI PREFECTURE IN THE REPUBLIC OF BOLIVIA

Vaca Diez Province



■ Guayaramerín:
Hospital Guayaramerín

This hospital is a main general hospital but not able to afford to diagnose due to insufficient of equipment.



■ Guayaramerín:
Centro de Salud

This CS locates in the urban area therefore its health service is active.



■ Guayaramerín, Rosario de Yata:
Puesto de Salud

This PS locates between Guayaramerín and Riberalta, and stands nearby the river. 1-doctor and 1-nurse manage this PS.



■ Riberalta:
Hospital Riberalta

This general hospital covers area widely for tertiary care. Due to the support of JOCV, laboratory has optimal technology.



■ Riberalta:
Hospital Materno Infantil

This hospital covers nearly 80% of the delivery in this municipality.



■ Riberalta, Conavi:
Centro de Salud

This CS is located in the center of the municipality, and they are active for EPI and family promotion.

Mamoré Province



■ Riberalta, Pueblo Nuevo:
Puesto de Salud

This CS is located at the edge of the municipality, and they are active for EPI and family planning promotion.



■ San Joaquin:
Ex-CS-Hospital Henry K. Beye

There are 3-doctors and 6-nurse, and having the function of dental care and laboratory. They have to cover wide consultation as main health facility.



■ San Joaquin:
Ex-CS-Hp / Edificio Nuevo

To cover this remote area, facility is required to have wider function than usual CS. Recently FPS has constructed new building.

Mamoré Province



■ **San Ramón:**
Ex CS-Hospital San Ramón
 This health facility covers wider consultation.



■ **San Ramón:**
Ex CS-Hp / Edificio Nuevo
 Due to the activity, FPS recently has constructed the building but no equipment supplied.



■ **Puesto Siles:**
Centro de Salud
 This is CS but widely covers patients coming through the river.

Moxos Province



■ **San Ignacio:**
Ex.CS-Hospital 3 de Noviembre
 It takes 2 hours by car from Trinidad but takes 6 hours in the rainy season. This requires here as more function than usual CS.



■ **Santísima Trinidad:**
Puesto de Salud
 Totally isolated area, only a doctor and a nurse support local Iindirenas by regularly traveling by boat.

Cercado Province



■ **Trinidad:**
Hospital German Busch
 Though its role is a tertiary care, their facility is quite poor, instead of enthusiasm of the staff.



■ **Trinidad:**
Hospital Materno Infantil
 In 1982 this facility has been constructed by Japanese Grant Aid. Facility itself keeps quite good condition but equipment has become superannuated.



■ **Cipriano Barace:**
Centro de Salud
 This is located at the edge of the center and covers near residents.

Cercado Province



■ **Villa Vecinal:**
Centro de Salud

This is located out of center city and covers poverty residents. Despite of its needs, facility and equipment is quite poor.



■ **San Javier:**
Centro de Salud

It takes 30 min. by car in the dry season, but it takes 3hrs. in the rainy season or no access to Trinidad city. Equipment and drug are covered optimally.



■ **San Pedro Nuevo:**
Puesto de Salud

Much further than San Javier, difficult access to the city. Activity of this PS is closed temporary due to the absence of last auxiliary nurse.



■ **San Vicente:**
Centro de Salud

This CS supplies health services to new residents from rural. Facility itself is recently built.



■ **Trinidad:**
Auxiliary Nursing School

This is auxiliary nursing school is located in the northern part of city. Most of graduates find jobs in Beni.



■ **Trinidad:**
Nursing Course-Technical Univ.

As one of the faculty of health science, this course has 5 years education. Nevertheless, educational equipment is old and poor.

Medical Boat



■ **CARITAS (NGO) Boat**

Though its role is a tertiary care, their facility is quite poor, instead of enthusiasm of the staff.



■ **CARITAS Boat Consultation**

Inside of the boat, there are general clinic and dental care. The tour takes about one month to go round. The content of treatment is mainly first aid, maternal & child care and health promotion.

Pilot Project

Training for 2 Hospitals by Hospital Universitario Japonés



■ Presentators and Participants of Trainig

11 presentators (10 doctors and 1 licensed nurse) were prepared for this training workshop.



■ Hospital Universitario Japonés

Hospital Universitario Japonés is located in the east side of Santa Cruz City, and it was founded by Japanese Grant Aid.



■ Condition of Training Workshop

Training was conducted in Hospital Universitario Japonés for 1 week in July 2002. Total 10 staffs from Hospital Presidente German Busch and Hospital Materno Infantil participated in this training.

CS Nueva Trinidad



■ General View of CS Nueva Trinidad

CS building was completed in the middle of July 2002 (construction period was approx. 3 months).



■ Dental Consultation Room



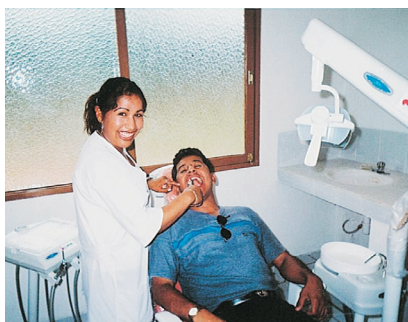
■ General Consultation Room

CS Santísima Trinidad



■ General View of CS Santísima Trinidad

CS building was completed in the middle of August 2002 (construction period was approx. 3.5 months).



■ Dental Consultation Room



■ Isinuta River

On the way to Santísima Trinidad from Villa Tunari, 3 big rivers obstruct the smooth transportation especially in the rainy season.

Pilot Project

Medical Boat "KENKO-GO"



General View of the Medical Boat

Ship-building of the Medical Boat was completed in the middle of July 2002. The Medical Boat carried out 2 trips of mobile clinic service during the Pilot Study.



Home Port: Puerto Almacen

Medical Boat is mooring at Puerto Almacen during the rainy season. In dry season, it change the home port to Los Puentes.



Rudder Room

Rudder room is located on the 3rd floor.



Engine Room

The capacity of diesel engine is 114 CV.



Top Floor



Barge Boat

Medical Boat is equipped with a aluminum barge boat.



Dental Consultation Room

Same type dental chair kit as CS Nueva Trinidad and Santísima Trinidad was installed in the Medical Boat.

ボリヴィア国
ベニ県地域保健医療システム強化計画調査

最終報告書
要約

目次

調査対象地位置図
写真集
目次
略語集

	頁
1 調査の背景	1
2 ベニ県地域保健医療における主要な問題点	2
3 マスター・プランの概要	5
3.1 開発目標	5
3.2 開発戦略	5
3.3 計画の内容	5
4 マスター・プランの段階的实施計画案	15
5 プロジェクト運営体制	17
6 実証試験 (Pilot Study)	18
6.1 実証試験実施体制	18
6.2 実証試験実施手順	18
6.3 実証試験評価基準	18
6.4 実証試験進捗状況	19
7 第1次モニタリング結果の評価 (2002年1月—8月)	19
7.1 マクロ的視点からの評価	19
7.2 ミクロ的視点からの評価	21
8 第2次モニタリング結果の評価 (2002年9月—12月)	23
9 技術移転計画	26
9.1 プロジェクト名	26
9.2 開始期間	26
9.3 実施機関	26
9.4 プロジェクト概要	26
10 結論と提言	29
9.1 結論	29
9.2 提言	29

ABBREVIATIONS

English		Spanish	
ADD	Acute Diarrheal Diseases	EDA	Enfermedad Diarreica Aguda
AIDS	Acquired Immunodeficiency Syndrome	SIDA	Síndrome de Inmuno Deficiencia Adquirida
ARI	Acute Respiratory Infection	IRA	Infección Respiratoria Aguda
BCG	Bacillus Calmette-Guerin (Vaccination)	BCG	Vaccuna BCG (Bacillus Calmette-Guerin)
C/P	Counterpart	C/P	Contraparte
CAPO	Attached Certificate of Services Offered	CAPO	Certificado Agregado de Prestaciones Otorgadas
CARITAS	Catholic Agency for Overseas Aid and Development	CARITAS	Agencia Catolica para la Ayuda y el Desarrollo
CDC	Center for Disease Control and Prevention (U.S.A.)	CDC	Centro para el Control y Prevención de las Enfermedades (EE.UU.)
CDD	Control of Diarrheal Diseases	CDD	Control de las Enfermedades diarreicas
CEASS	Center for Medical Supplies	CEASS	Centro de Abastecimientos y Suministros en Salud
CENETROP	National Center for Tropical Diseases	CENETROP	Centro Nacional de Enfermdades Tropicales
CIDA	Canadian International Development Agency	CIDA	Agencia Internacional Canadiense para el Desarrollo
CIES	Center for Research, Education and Services	CIES	Centro de Investigación, Edcuación y Servicios
CIPS	Center for Health Inputs	CIPS	Centro de Insumos para la Salud
CNS	National Health Insurance	CNS	Caja Nacional de Salud
CPR	Contraceptive Prevalence Rate	TPA	Tasa de Prevalencia Anticonceptiva
CRS	Catholic Relief Services (NGO)	CRS	Catholic Relief Services (ONG)
CS	Health Center	CS	Centro de Salud
DF/R	Draft Final Report	DF/R	Borrador del Informe Final
DHS	Demographic and Health Survey	ENDSA	Encuesta Nacional de Demografía y Salud
DILOS	Local Health Board	DILOS	Directorio Local de Salud
DPT	Diphtheria, Whooping cough and Tetanus	DPT	Vacuna DPT (Dipteria, Tosferina y Tétanos)
DUF	Directorate of Funds	DUF	Directorio Unico de los Fondos
EPARU	Rural Pastoral Team	EPARU	Equipo de Pastoral Rural
EPI	Expanded Programme on Immunization	PAI	Programa Ampliado de Immunizaciones
F/R	Final Report	F/R	Informe Final
FIS	Social Investment Fund	FIS	Fondo de Inversion Social
FPS	National Productive and Social Investment Fund	FPS	Fondo Nacional de Inversion Productiva y Social
GDP	Gross Domestic Product	PIB	Product Interno Bruto
HAM	Honorable Municipal Government	HAM	Honorable Alcaldia Municipal
HIPC	Heavily Indebted Poor Country	PPME	País Pobre Muy Endeudado

English		Spanish	
HIV	Human Immunodeficiency Virus	VIH	Virus de Inmunodeficiencia Humana
IC/R	Inception Report	IC/R	Informe Inicial
ICU	Intensive Care Unit	CUI	Unidad de Cuidados Intensivos
IDB	Inter-American Development Bank	BID	Banco Interamericano de Desarrollo
IDD	Iodine Deficiency Disorders	DDY	Desordenes por deficiencia de yodo
IMCI	Integrated Management of Childhood Illness	AIEPI	Atención Integral de las Enfermedades Prevalentes de la Infancia
IMR	Infant Mortality Rate	TMI	Tasa de Mortalidad Infantil
INE	National Institute of Statistics	INE	Instituto Nacional de Estadística
IT/R	Interim Report	IT/R	Informe Intermedio
IUD	Intrauterine Contraceptive Device	DIU	Dispositivo Intrauterino
JICA	Japan Intrenational Cooperation Agency	JICA	Agencia de Cooperacion Internacional del Japon
JST	JICA Study Team	JST	Equipo de Estudio JICA
KAP	Knowledge, Attitude and Practice	CAP	Conocinientos, Actitudes y Prácticas
LBW	Low Birth Weight	BPN	Bajo Peso al Naver
M/M	Minutes of Meeting	M/M	Minuta de Reunión
M/P	Master Plan	P/M	Plan Maestro
MSPS	Ministry of Health and Social Provision	MSPS	Ministerio de Salud y Previsión Social
ODA	Official Development Assistance	ADO	Asistencia Oficial para el Desarrollo
O/M (O&M)	Operation and Maintenance	O/M (O&M)	Operacion y Mantenimiento
ORS	Oral Rehydration Salts	SRO	Sal de Rehidratacion Oral
ORT	Oral Rehydration Therapy	TRO	Terapia de Rehidratacion Oral
OTB	Basic Territorial Organization	OTB	Organizacion Territorial de Base
PAHO	Pan-American Health Organization	OPS	Organización Panamericana de la Salud
PDD	Department Development Plan	PDD	Plan Departamental de Desarrollo Economico y Social
PDM	Municipal Development Plan	PDM	Plan de Desarrollo Municipal
PF/R	Prefinal Report	PF/R	Informe Prefinal
PHC	Primary Health Care	APS	Atención Primaria de Salud
POA	Annual Operation Plan	POA	Plan Operativo Anual
PR/R	Progress Report	PR/R	Informe de Progreso
PROSIN	Integrated Health Project	PROSIN	Proyecto de Salud Integral
PRSP	Poverty Reduction Strategy Papers	EPRP	Estrategias Para la Reducción de la Pobreza
PS	Health Post	PS	Puesto de Salud

English		Spanish	
RHF	Recommended Home Fluid	SC	Suero Casero
SBS	Basic Health Insurance	SBS	Seguro Básico de Salud
SC	Steering Committee	CD	Comité de Dirección
SEDES	Department Health Services	SEDES	Servicio Departamental de Salud
SNIS	National Sub-system of Health Information	SNIS	Subsistema Nacional de Información Salud
STD	Sexually Transmitted Diseases	ETS	Enfermedades Transmitidas Sexualmente
SUMI	Universal Health Insurance for Mothers and Children	SUMI	Seguro Universal Materno Infantil
TB	Tuberculosis	TB	Tuberculosis
TBA	Traditional Birth Attendant	TBA	Partera
TC	Technical Committee	CT	Comité de Técnico
TDD	Trinidad	TDD	Trinidad
TFR	Total Fertility Rate	TGF	Tasa Global de Fecundidad
TT	Tetanus Toxoide	TT	Toxoide Tetánico
UNDP	United Nations Development Programme	PNUD	Programa de las Naciones Unidas para Desarrollo
UNICEF	United Nations Children's Fund	UNICEF	Fondo de las Naciones Unidas para la Infancia
USAID	United States Agency for International Development	USAID	Agencia Internacional de los Estados Unidos para el Desarrollo
WB	World Bank	BM	Banco Mundial
WHO	World Health Organization	OMS	Organización Mundial de la Salud
PPL	Popular Participation Law	LPP	Ley de Participacion Popular
WRA	Women of Reproductive Age	MEF	Mujeres de Edad Fertil

Remarks 1: SUMI and DILOS

The Bolivian Government has newly introduced the expanded public insurance for maternal and infant health, SUMI (Seguro Universal Materno Infantil: Law No. 2426) that replaced the SBS at the end of 2002. To secure health service under SUMI, the government has also organized the Local Health Board named DILOS (Directorio Local de Salud) in each municipality for the health administration in place of District Health. According to the Law No. 2426, 10% of annual municipal budget and additional 10% from central government will be allocated to DILOS which consists of 3 members, i.e., City Mayor, SEDES representative and OTB (Surveillance Committee) representative. DILOS is responsible for the health administration including the operation/ maintenance of health/ medical facilities in each municipal jurisdiction