SCHOOL OF WATER AND WASTE

THE POLICY & PRACTICE FORUM 2023

SF PI Meeting

SFD in GIZ

April 25 - 27, 2023

WATER RESEARCH COMMISSION

NFSSM Alliance

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

FSMA faecal sludge management alliance

COLUMBIA UNIVERSITY IN THE CITY OF NEW YORK

IWA the international water association

Structure of Presentation

Contents…

- Positioning of SFD within GIZ
- SFD in Costa Rica
- SFD in Benin
- SFD in Northern Irak
- SFD in Zambia
- Strategy to further disseminate SFD at project level

Positioning of SFD in GIZ

GIZ has been a long-term supporter of the SFD Promotion initiative:

- Participated in the creation of the SFD PI alongside other key stakeholder
- Contributed to the development of the approach, tools and webportal
- Hosts, manages and maintain the SFD portal
- Supports the quality control and publishing of SFD
- Contributes to the positioning of SFD in the sector and the global agenda
- Promotes its use in the GIZ Water and Sanitation project portfolio

Partners of the SFD Promotion Initiative

CoTriSan in Costa Rica

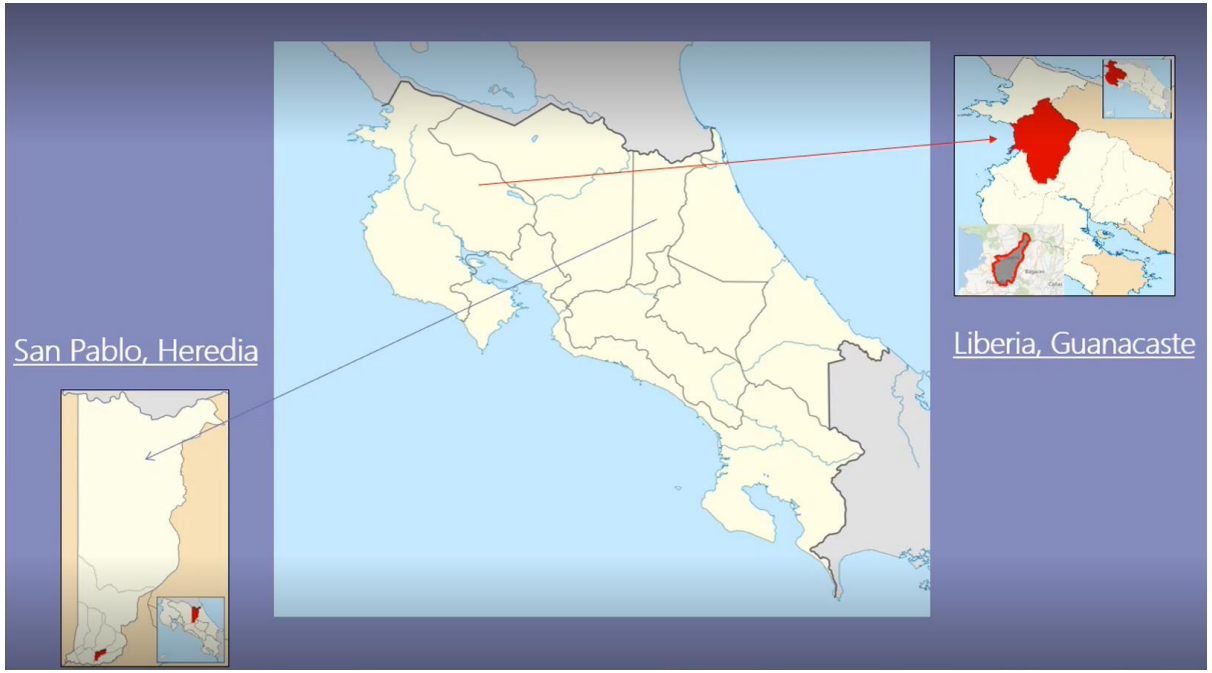
Activity description: Analyze the sanitation services in two pilot municipalities complemented with capacity building and awareness raising activities for the stakeholders involved

Area of intervention:

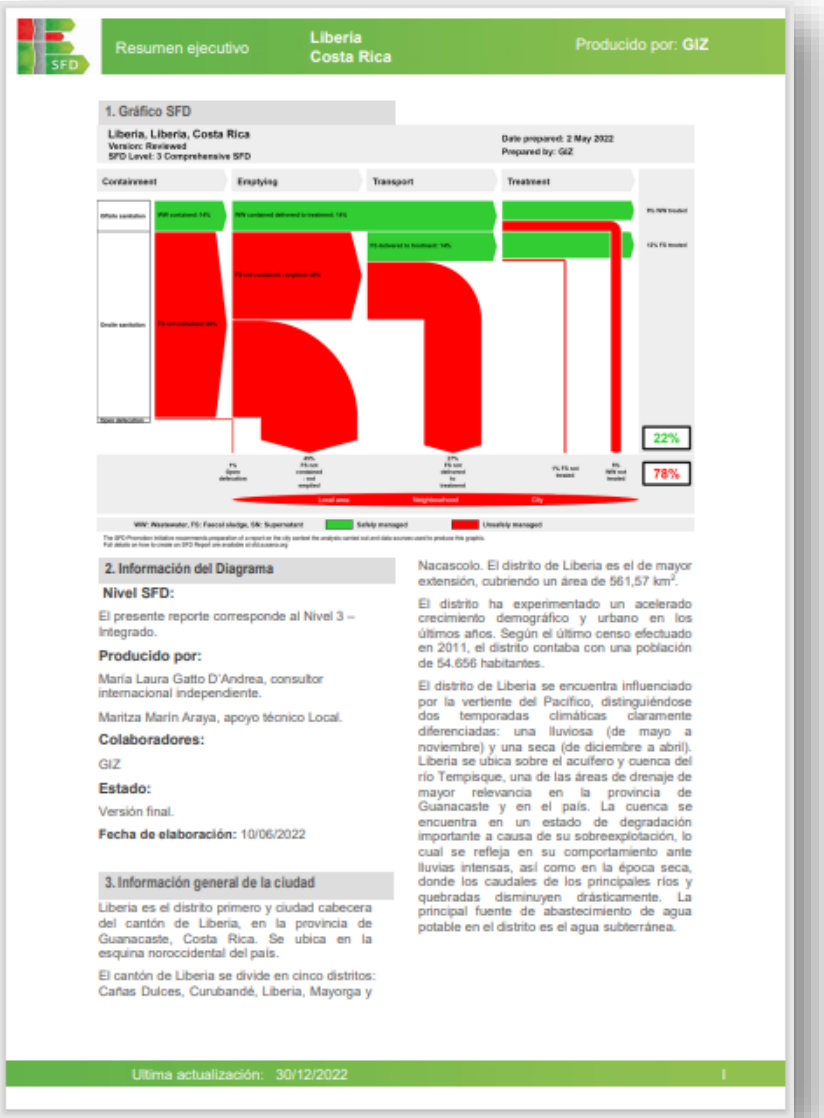
- Liberia (67.000 inh.)
- San Pablo (30.000 inh.)

Objective 1:

- Encourage scaling of SFD assessment in other municipalities
- Inform a sanitation strategy for the counterpart agencies (Ministry of Health and Water and Sewerage Authority)



SFD in Costa Rica



Resumen ejecutivo — Liberia, Costa Rica — Producido por: GIZ

1. Gráfico SFD

Liberia, Liberia, Costa Rica
Version: Reviewed
SFD Level: 3 Comprehensive SFD
Date prepared: 2 May 2022
Prepared by: GIZ

Containment | Emptying | Transport | Treatment

22%
78%

Local area | Neighbourhood | City

2. Información del Diagrama

Nivel SFD:

El presente reporte corresponde al Nivel 3 – Integrado.

Producido por:

María Laura Gatto D'Andrea, consultor internacional independiente.

Maritza Marín Araya, apoyo técnico Local.

Colaboradores:

GIZ

Estado:

Versión final.

Fecha de elaboración: 10/06/2022

3. Información general de la ciudad

Liberia es el distrito primero y ciudad cabecera del cantón de Liberia, en la provincia de Guanacaste, Costa Rica. Se ubica en la esquina noroccidental del país.

El cantón de Liberia se divide en cinco distritos: Cañas Dulces, Curubandé, Liberia, Mayorga y Nacascolo. El distrito de Liberia es el de mayor extensión, cubriendo un área de 561,57 km².

El distrito ha experimentado un acelerado crecimiento demográfico y urbano en los últimos años. Según el último censo efectuado en 2011, el distrito contaba con una población de 54.656 habitantes.

El distrito de Liberia se encuentra influenciado por la vertiente del Pacífico, distinguiéndose dos temporadas climáticas claramente diferenciadas: una lluviosa (de mayo a noviembre) y una seca (de diciembre a abril). Liberia se ubica sobre el acuífero y cuenca del río Tempisque, una de las áreas de drenaje de mayor relevancia en la provincia de Guanacaste y en el país. La cuenca se encuentra en un estado de degradación importante a causa de su sobreexplotación, lo cual se refleja en su comportamiento ante lluvias intensas, así como en la época seca, donde los caudales de los principales ríos y quebradas disminuyen drásticamente. La principal fuente de abastecimiento de agua potable en el distrito es el agua subterránea.

Ultima actualización: 30/12/2022

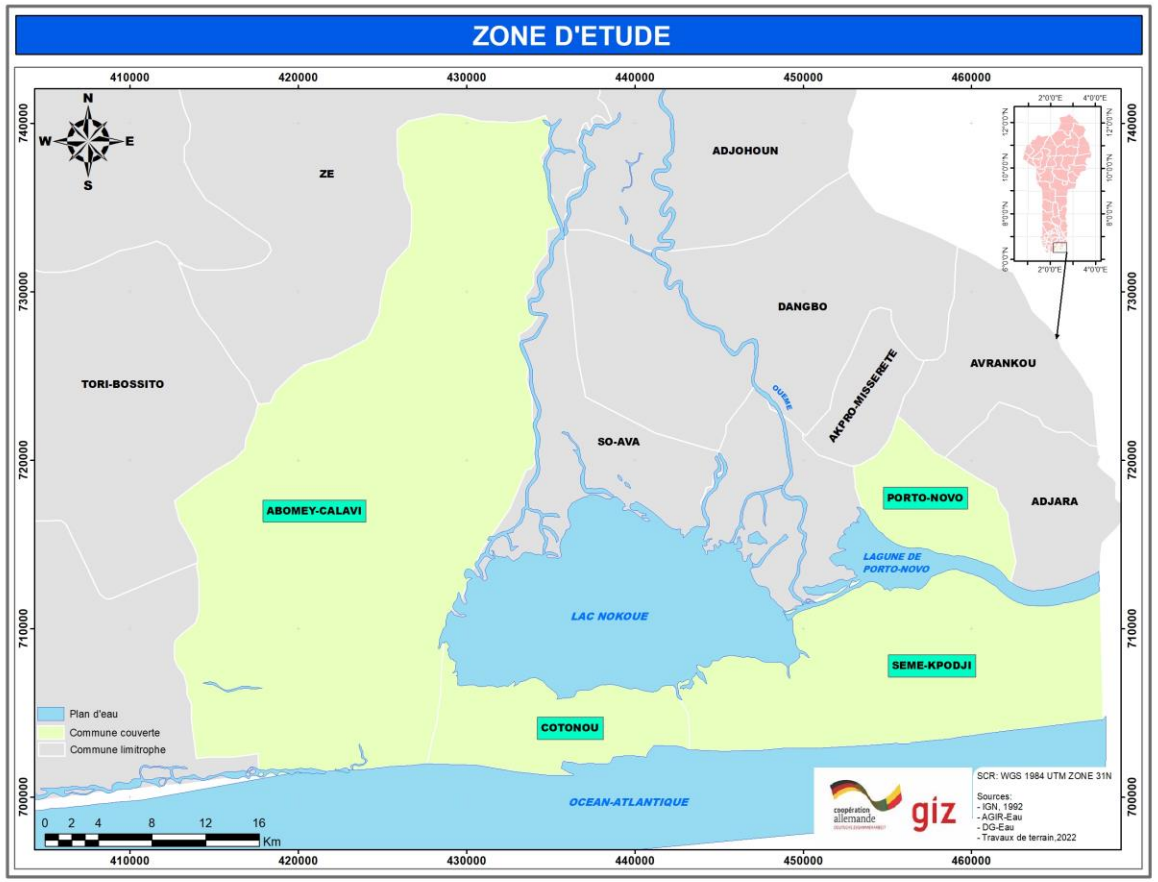
SFD in Benin

AGIR-Eau in Benin

Activity description: Carry out a baseline analysis of the sanitation services complemented with capacity building and awareness raising activities for the stakeholders involved

Area of intervention: Grand-Cotonou – (2 Mil inhabitants)

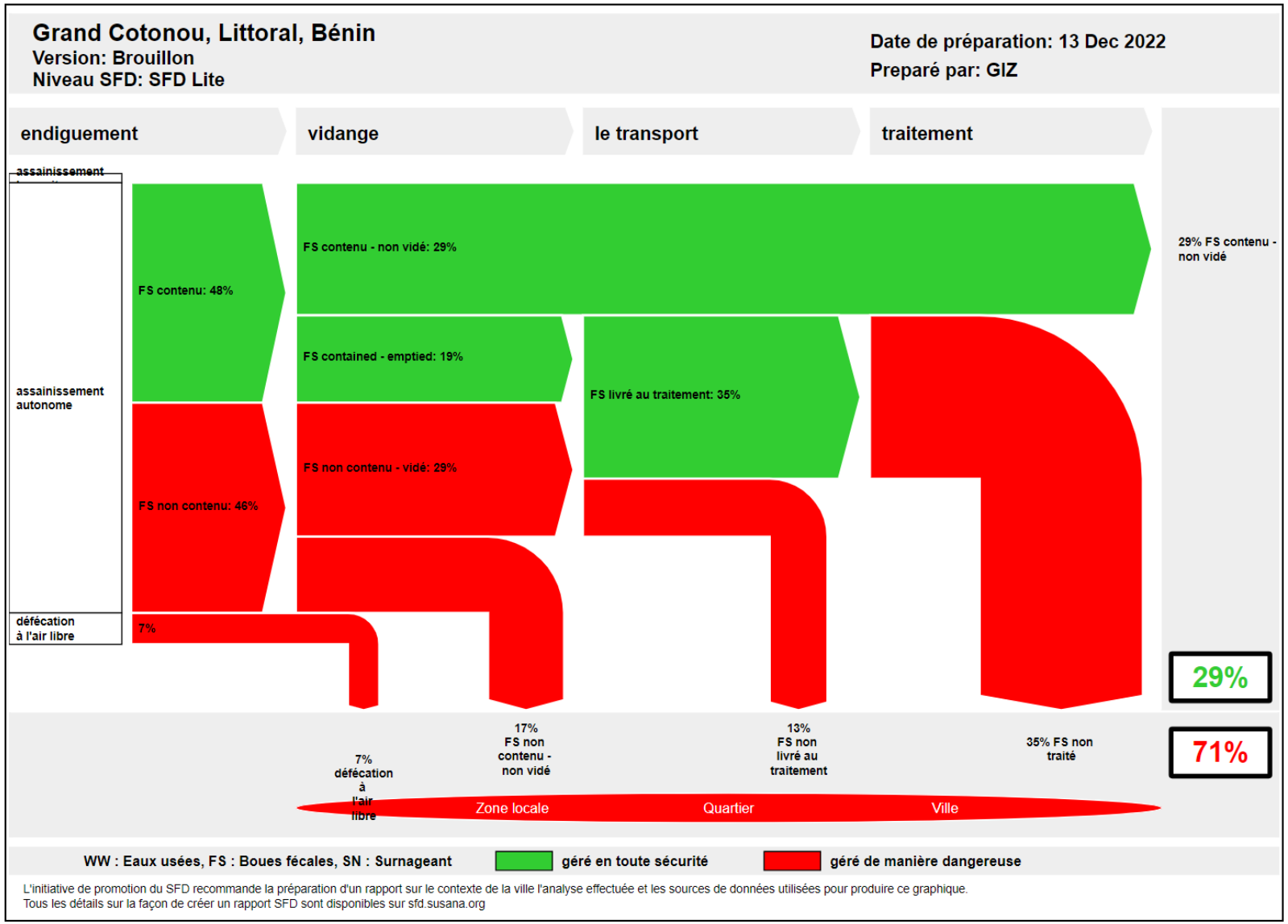
- Cotonou
- Abomey Calavi
- Porto-Novo
- Sémé-Kpodji



Objective :

engage a dialogue with the relevant stakeholders, identify the gaps in the sanitation chain and establish SFD as a monitoring tool for the municipalities

SFD in Benin


Grand Cotonou, Littoral, Bénin
Version: Brouillon
Niveau SFD: SFD Lite
Date de préparation: 13 Dec 2022
Preparé par: GIZ
endiguement
vidange
le transport
traitement
assainissement autonome
défécation à l'air libre
FS contenu: 48%
FS non contenu: 46%
7%
FS contenu - non vidé: 29%
FS contained - emptied: 19%
FS non contenu - vidé: 29%
FS livré au traitement: 35%
29% FS contenu - non vidé
29%
71%
7% défécation à l'air libre
17% FS non contenu - non vidé
13% FS non livré au traitement
35% FS non traité
Zone locale
Quartier
Ville
WW : Eaux usées, FS : Boues fécales, SN : Surnageant
géré en toute sécurité
géré de manière dangereuse
L'initiative de promotion du SFD recommande la préparation d'un rapport sur le contexte de la ville l'analyse effectuée et les sources de données utilisées pour produire ce graphique.
Tous les détails sur la façon de créer un rapport SFD sont disponibles sur sfd.susana.org

SFD in Northern Irak

ConNex in North Iraq

→ **Development of the "Smart Sanitation Concept"**

Activity description: Analysis of water and sanitation provision through combined use of 3 diagnostic tools: SFD, CSDA, ECAM

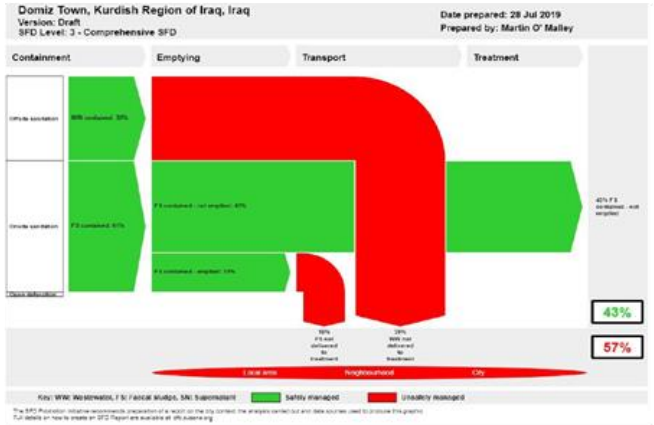
Area of intervention: 2 refugee camps and 1 host community (60.000 people relying on on-site sanitation)

Objective: ensure the sustainability of the future intervention in these areas


Desludging of the holding tank at 171 Old Zozan. The hole that has been left in the slab is only just big enough for the suction hose and we were unable to inspect the structure due to the restricted opening size. Our camera could not fit through.

SFD in Northern Irak

SFD
(Shit Flow Diagram)



Assessment of the excreta management situation

CSDA
(City Service Delivery Assessment)

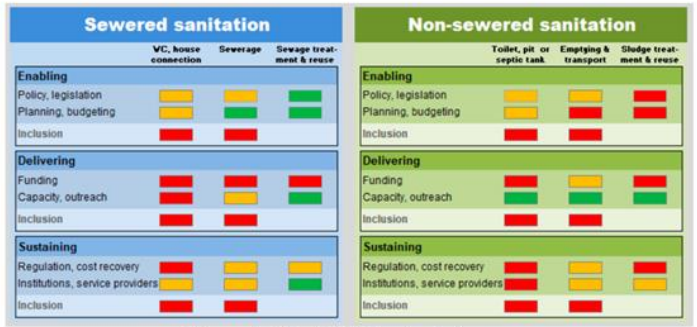


Figure 4: A Full CSDA output diagram

Assessment of the enabling environment for provision of sanitation services

ECAM
(Energy Performance and Carbon Emissions Assessment and Monitoring Tool)

Assessment of energy consumption and GHG emission of water and sanitation systems

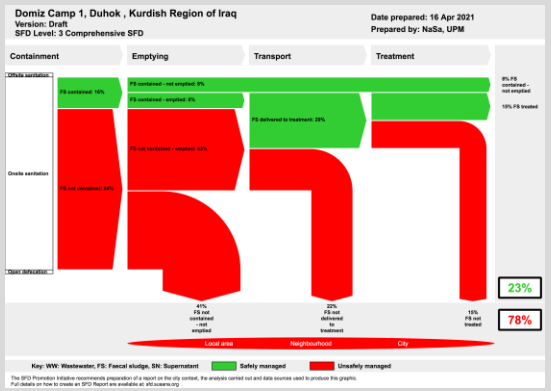
SMART SANITATION APPROACH

SFD in Northern Irak

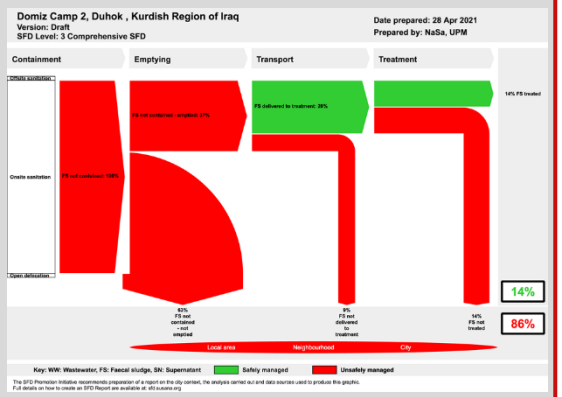
Safe Sanitation (SFD)

Enabling Environment (CSDA)

Domiz 1



Domiz 2



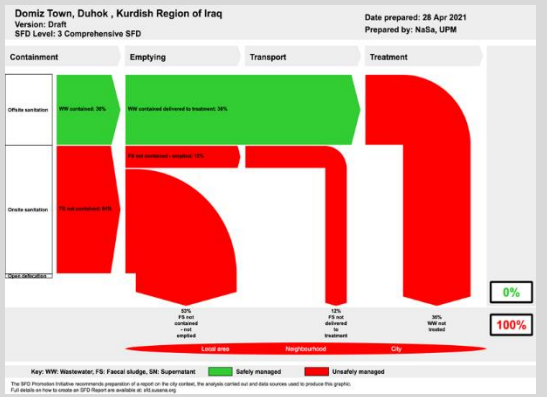
Non-sewered sanitation

	Toilet, pit or septic tank	Emptying & transport	Sludge treat- ment & reuse
Enabling			
Policy, legislation	1,0	1,0	0,5
Planning, budgeting	1,0	1,0	0,5
Inclusion	1,0	1,0	
Delivering			
Funding	0,7	0,7	0,5
Capacity, outreach	0,5	0,5	0,5
Inclusion	1,0	1,0	
Sustaining			
Regulation, cost recovery	0,2	0,2	0,2
Institutions, service providers	0,3	0,5	0,3
Inclusion	0,5	0,5	

Sewered sanitation

	WC, house connection	Sewerage	Sewage treat- ment & reuse
Enabling			
Policy, legislation	0,3	0,3	0,3
Planning, budgeting	0,0	0,0	0,0
Inclusion	0,0	0,0	
Delivering			
Funding	0,0	0,0	0,0
Capacity, outreach	0,3	0,3	0,0
Inclusion	0,3	0,3	
Sustaining			
Regulation, cost recovery	0,0	0,0	0,0
Institutions, service providers	0,0	0,3	0,0
Inclusion	0,2	0,2	

Domiz Town



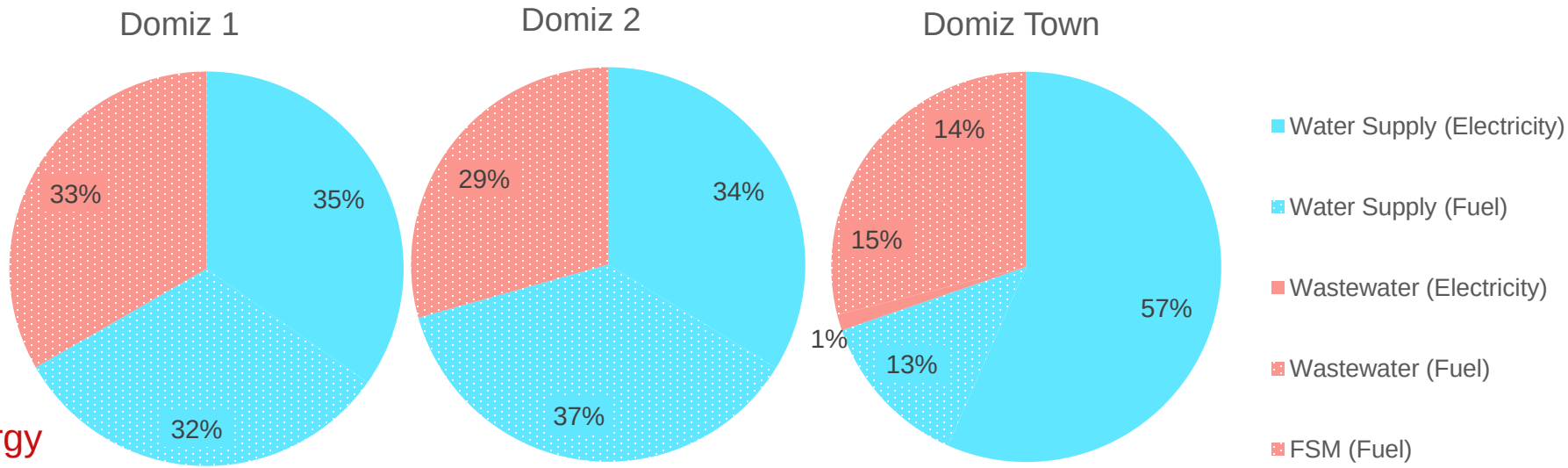
Non-sewered sanitation

	Toilet, pit or septic tank	Emptying & transport	Sludge treat- ment & reuse
Enabling			
Policy, legislation	0,3	0,3	0,3
Planning, budgeting	0,0	0,0	0,0
Inclusion	0,0	0,0	
Delivering			
Funding	0,0	0,0	0,0
Capacity, outreach	0,5	0,5	0,0
Inclusion	0,3	0,3	
Sustaining			
Regulation, cost recovery	0,2	0,5	0,0
Institutions, service providers	0,0	0,1	0,0
Inclusion	0,3	0,3	

SFD in Northern Irak

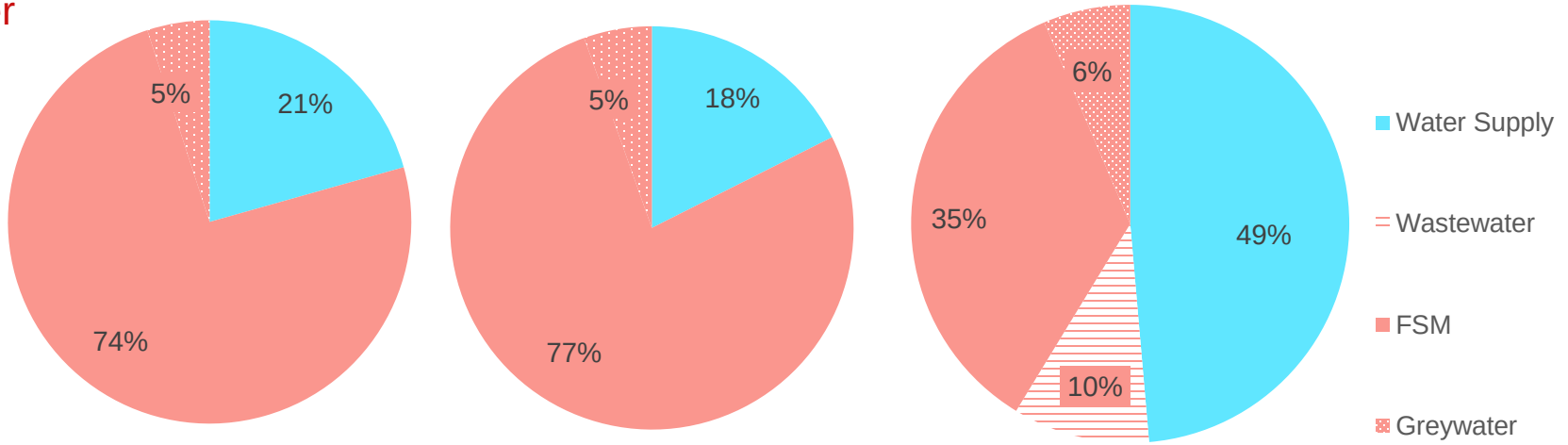
Energy Consumption

Total energy consumption per year per capita



Greenhouse Gas Emissions

Total GHG emissions per year and capita

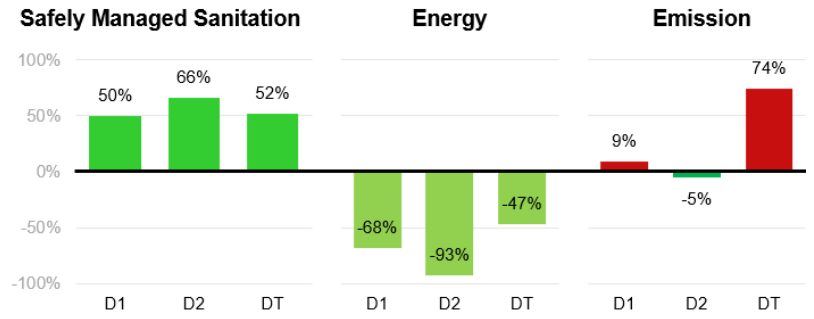


SFD in Northern Irak

Outcomes

- Development of 4 long-term planning scenarios to inform strategies and decision making
- Identification and implementation of institutional and technical measures to optimize sanitation services in the short term

Potential:



Proposed scenarios and measures take into consideration the aspects of:

- **safely managed sanitation**
- **energy consumption**
- **GHG emissions**

O1 Optimization of Enabling Environment Domiz Town

O2 Install overflow valves for household water tanks (Domiz 1 & 2)

Abstraction → Treatment → Distribution

O3 Prevent greywater discharge in OSS & cover manholes (Domiz 1)

Containment → Emptying → Transport → Treatment → Reuse / Disposal

O4 Add soak pits to septic tanks (Domiz 2)

Containment → Emptying → Transport → Treatment → Reuse / Disposal

O5 Optimize emptying frequency with level sensors and web-based monitoring system (all)

Containment → Emptying → Transport → Treatment → Reuse / Disposal

O6 Covering the anaerobic lagoons A1 & B1 at Fayda WSP (all)

Containment → Emptying → Transport → Treatment → Reuse / Disposal

SFD in Zambia

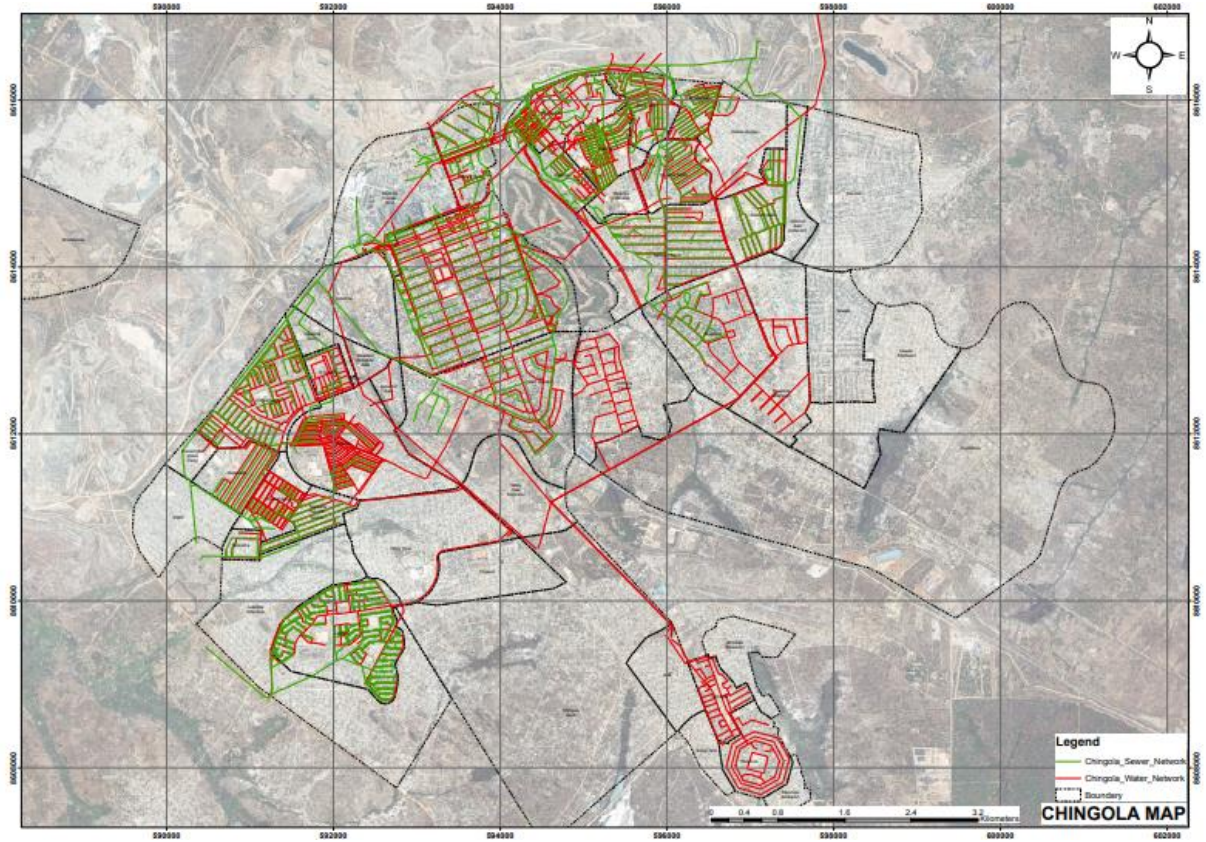
RWSII in Zambia

Activity description: reporting on sanitation services, energy efficiency and GHG emission at utility level, using SFD and ECAM

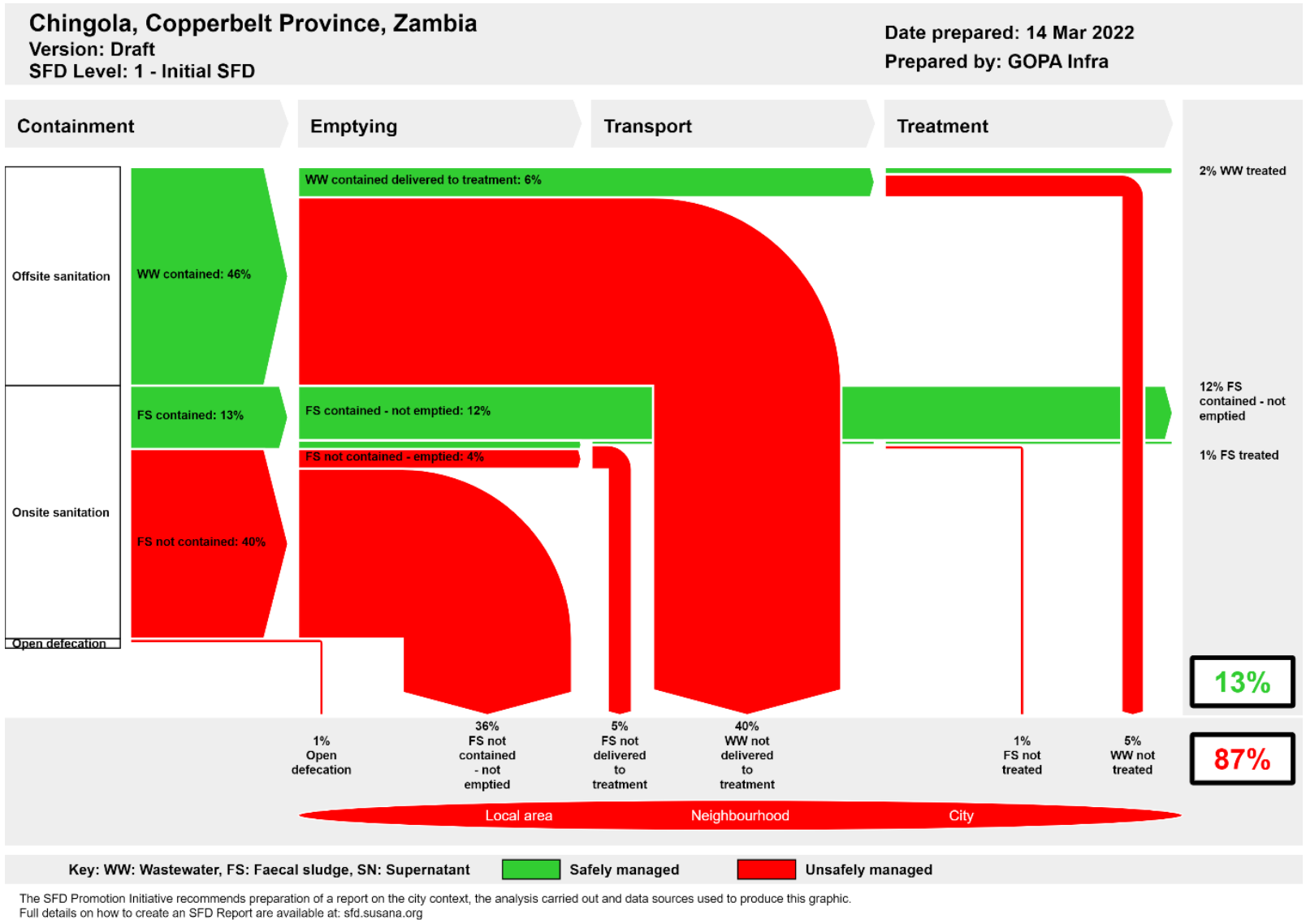
Area of intervention: service area of 6 water utilities

Objective:

- support the utilities in improving their operational efficiency and defining climate mitigation measures
- Inform national sanitation strategies
- Improve national NDC reporting

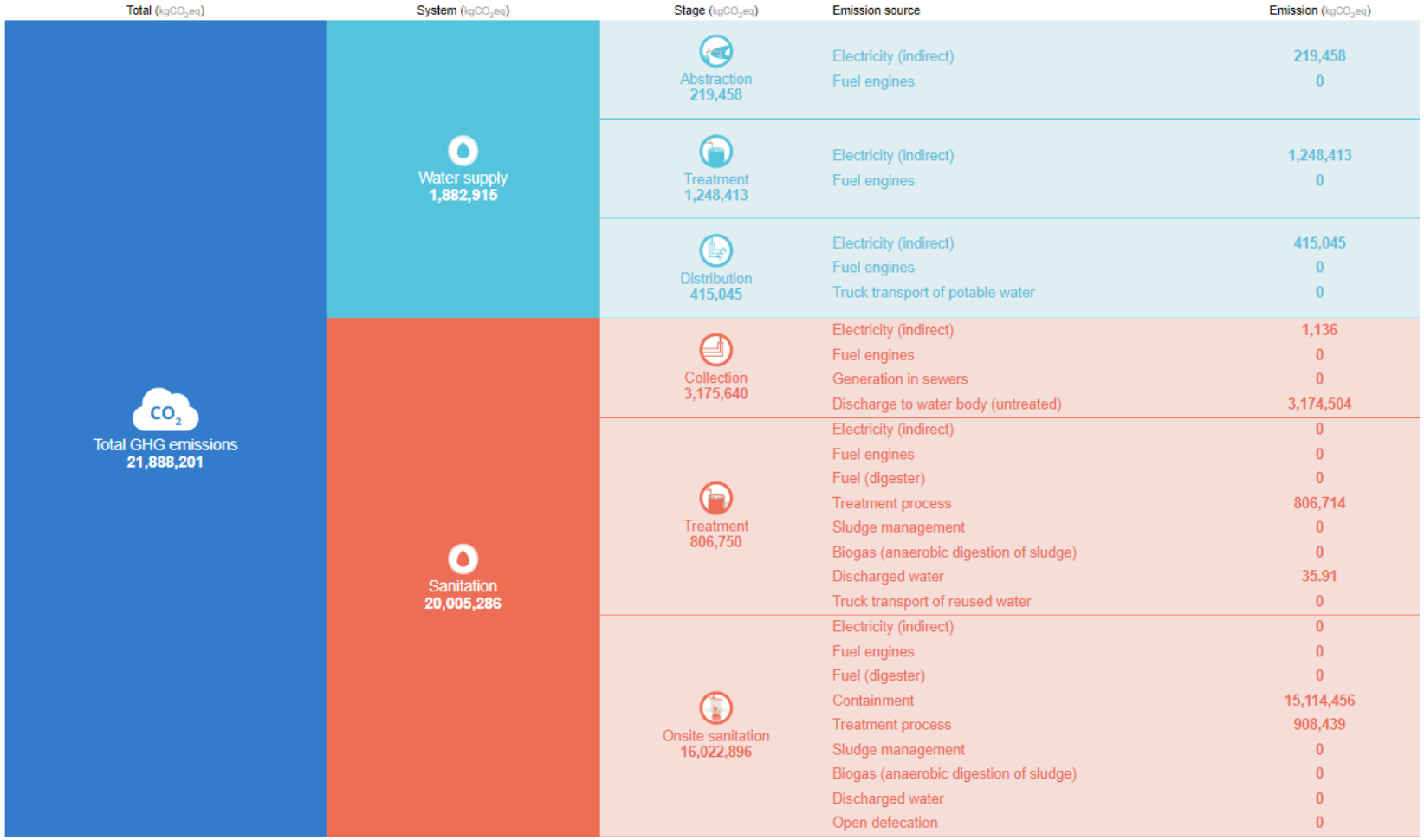


SFD in Zambia

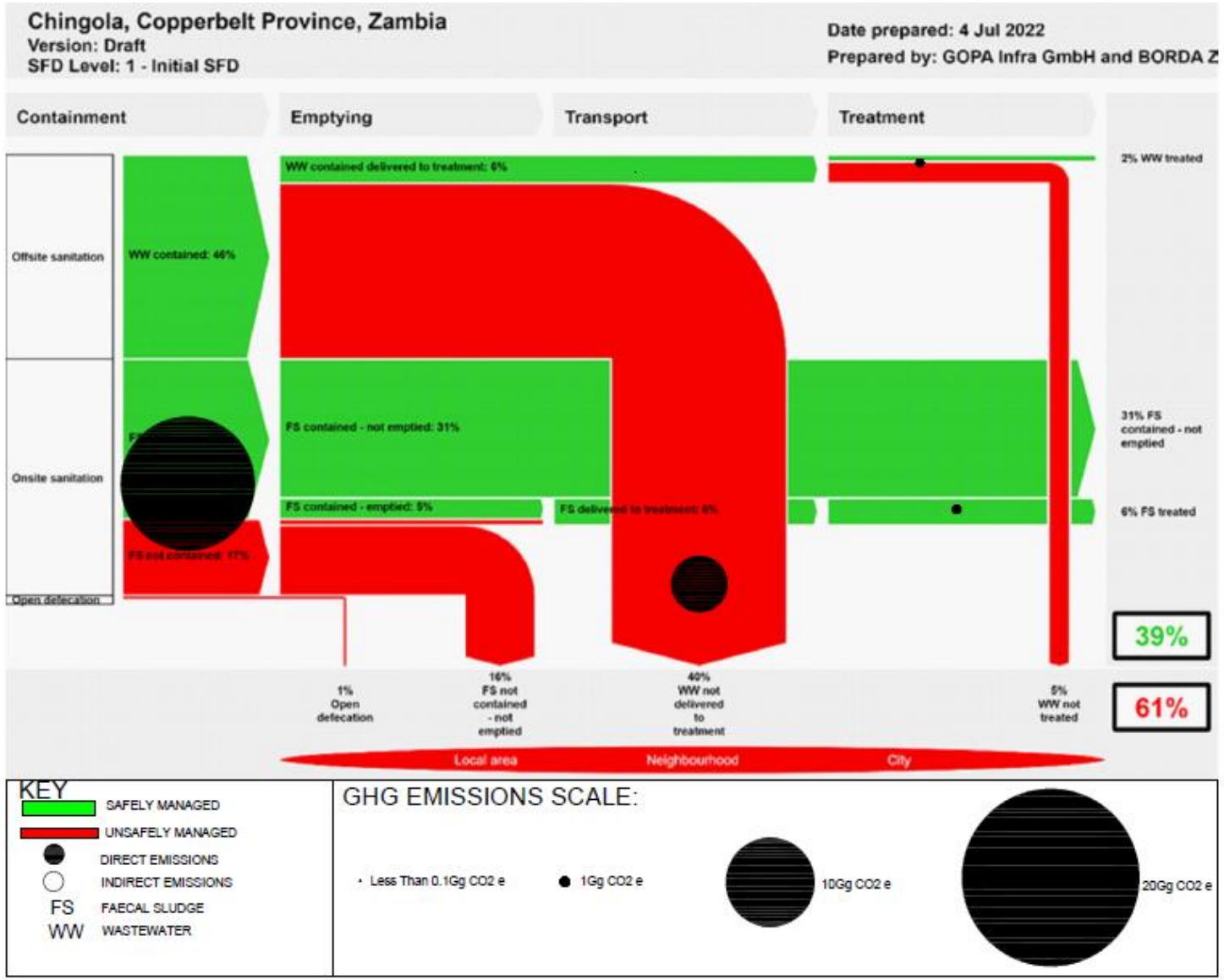


The SFD Promotion Initiative recommends preparation of a report on the city context, the analysis carried out and data sources used to produce this graphic.
Full details on how to create an SFD Report are available at: sfd.susana.org

SFD in Zambia

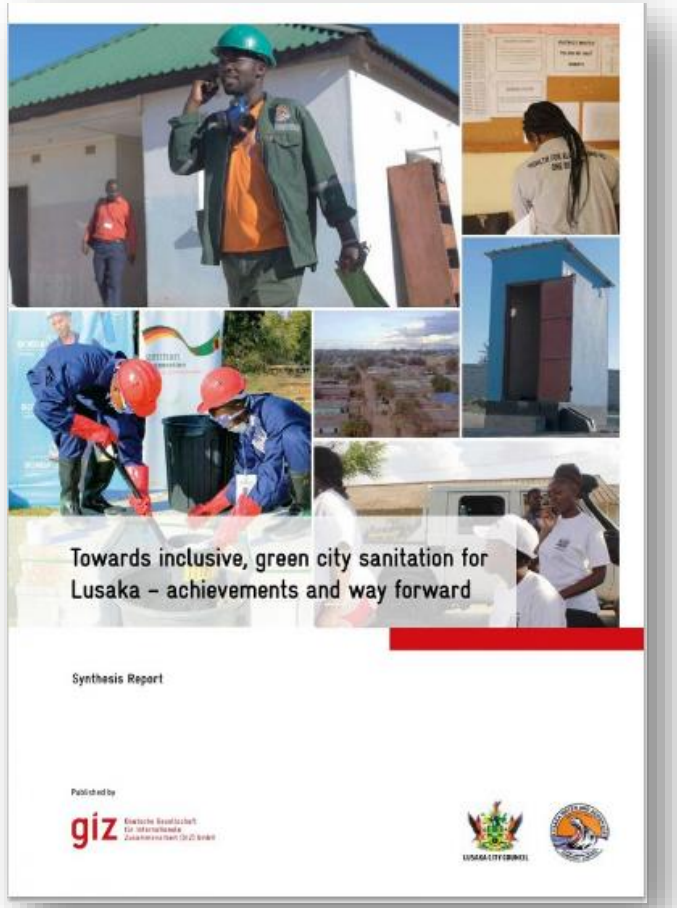


SFD in Zambia



More examples

- **RUWASS in Uganda:** gain common understanding of FSM issues in Kampala amongst stakeholders and identify synergies amongst actors to create a road map + used in 6 towns as part of town planning processes
- **CFS-Lusaka project:** investments (KfW, EIB, World Bank and AfDB) were prioritized with the use of an SFD baseline and projected SFDs looking at 3 different post project scenarios
- **Many more (Tanzania, Afghanistan, India, etc.)**



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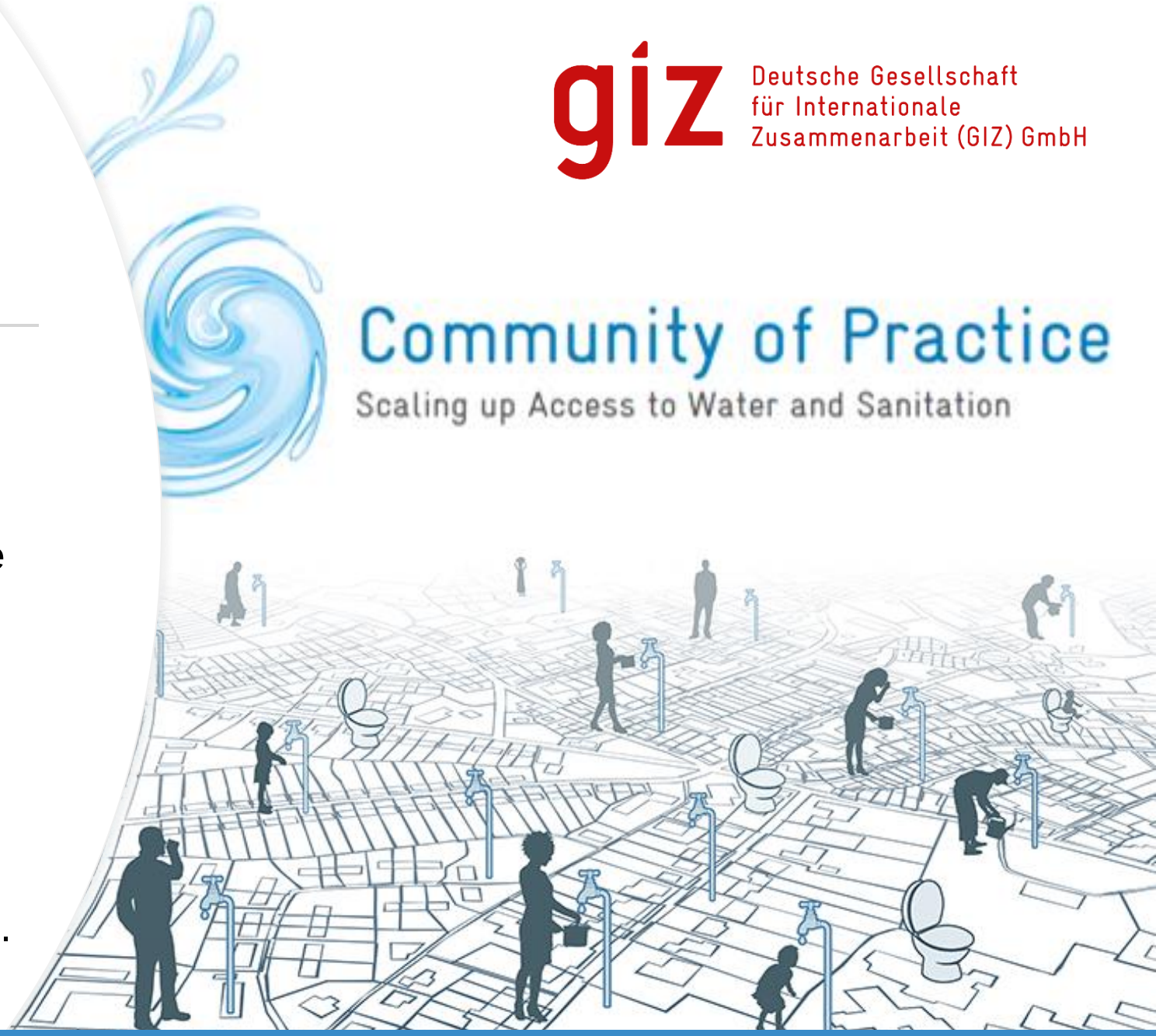
Strategy for further dissemination

- Promote SFD on different platforms: sectoral and regional networks, community of practices, etc.
- Encourage internal knowledge exchange between projects
- Collaborate with the department in charge of appraisal mission and project proposals
- SFD as part of the standard GIZ “toolkit”
- Explore intersectoral uses: climate mitigation, inclusivity (LNOB), health, etc.



Thank you !

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