SFD Report
Chintamani, India

prepared by:

Technology Informatics Design Endeavour (TIDE)

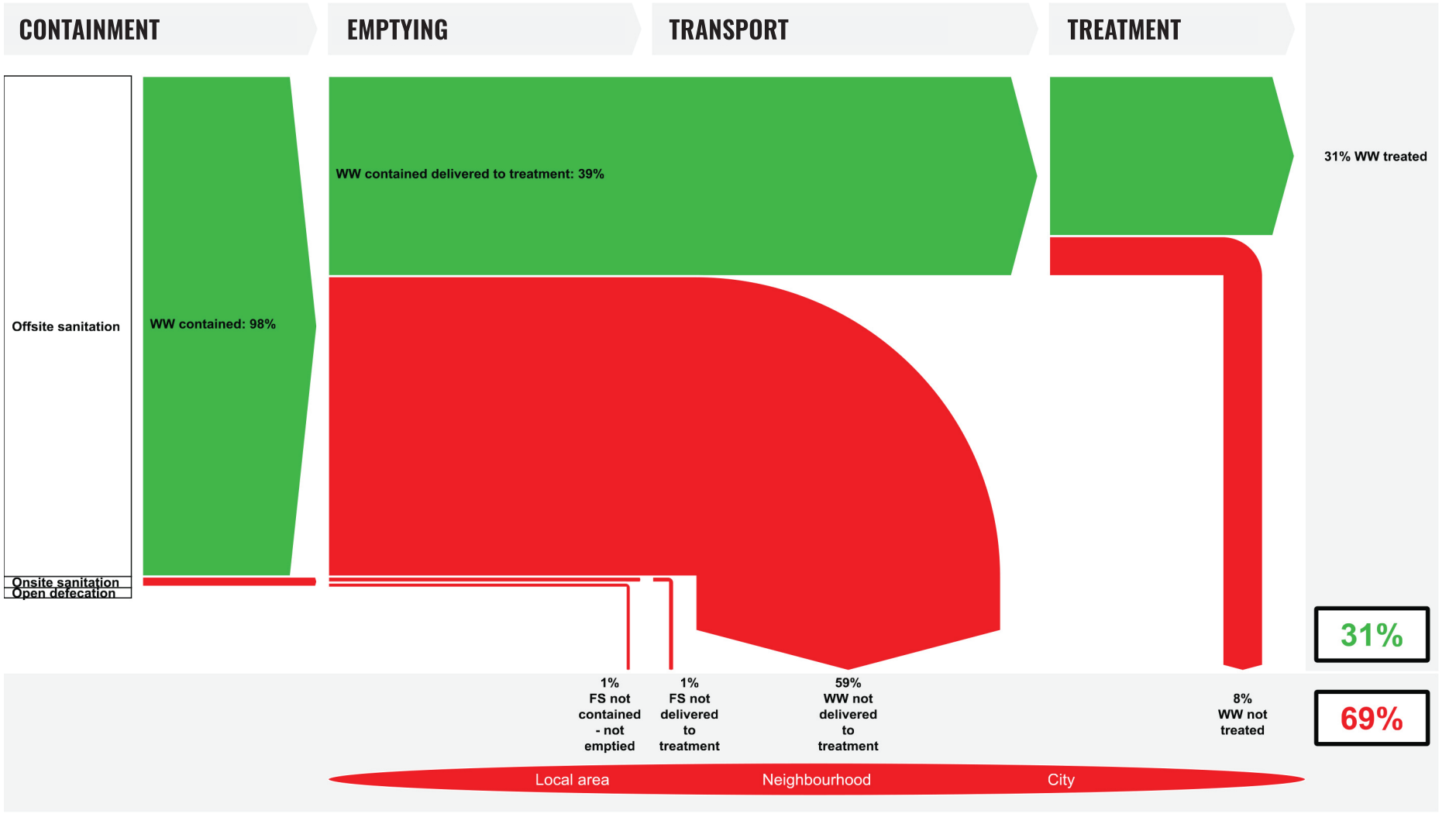
November 2021

Chintamani is a City Municipal Council in Chikkaballapur district, Karnataka, India. It is located 38.3 km to the east of district headquarter Chikkaballapur. Spread over an area of 15 sq.km and divided into 31 wards, the city has a projected population estimate of 88,000 in 2021.

SFD GRAPHIC

Chikkaballapur, Karnataka, India
Version: Draft
SFD Level: SFD Lite

Date prepared: **28 Apr, 2021**
Prepared by: **TIDE**



Key: WW: Wastewater, FS: Faecal sludge, SN: Supernatant **Safely managed** **Unsafely managed**

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

The SFD assessment has shown that, 31% of the wastewater is safely managed and 69% wastewater unsafely managed.

SERVICE OUTCOMES

SFD MATRIX FOR CHINTAMANI

Tabulated form of the grid selection for data entry

Chintamani Municipality, India, 28 Apr 2021. SFD Level : SFD Lite
Population : 88000

Proportion of Tanks : Septic Tanks : 4%, Fully Lined Tanks : 85%, Lined, Open Bottom Tanks : 11%

Containment						
System Type	**Population**	**Transport**	**Treatment**	**FS Emptying**	**FS Transport**	**FS Treatment**
	Pop	W4a	W5a	F3	F4	F5
System Label and Description	Proportion of population using this type of system (p)	Proportion of wastewater in sewer system, which is delivered to centralised treatment plants	Proportion of wastewater delivered to centralised treatment plants, which is treated	Proportion of this type of system from which faecal sludge is emptied	Proportion of faecal sludge emptied, which is delivered to treatment plants	Proportion of faecal sludge delivered to treatment plants, which is treated
T1A1C1 Toilet discharges directly to a centralised combined sewer	98.0	40.0	80.0			
T1A2C9 Septic tank connected to 'don't know where'	0.1			80.0	0.0	0.0
T1A3C9 Fully lined tank (sealed) connected to 'don't know where'	1.7			80.0	0.0	0.0
T1A4C9 Lined tank with impermeable walls and open bottom, connected to 'don't know where'	0.2			80.0	0.0	0.0

OFFSITE SANITATION SYSTEM

Chintamani town has a centralised sewerage system installed within the municipal area. As per the consultation with the CMC officials and physical survey, around 98% of the population is using the sewerage system (T1A1C1) for disposing the waste water, which is connected to the sewage treatment plant (STP).

Oxidation pond in the STP

ONSITE SANITATION SYSTEM

CONTAINMENT:

Around 2% population is readily dependent on onsite sanitation system consisting of 0.1% of toilets connected to septic tank (T1A2C9) installed at the government quarters, 1.7% of fully lined tank (sealed), (T1A3C9) and 0.2% of lined tanks with impermeable walls and open bottom (T1A4C9) at ward number 8 and 9 (based on field survey and community engagement).

Final discharge of waste water from sewer network

EMPTYING:

The proportion of sludge emptied from the on-site containment sanitation system is considered as 80% (F3) as the desludging frequency mainly varies from 2-3 years.

Currently, the CMC provides services for cleaning of containment systems by deputing the desludging vehicle. The septage collected is often dumped into the nearest manhole. Based on the field survey and discussions with UGD supervisor, out of the 2%, 1% of FS is not contained & emptied and 1% of FS is not delivered to the treatment plant.

TRANSPORTATION:

The proportion of wastewater in sewer system delivered to centralized treatment plant is around 2 MLD, which is 40% (W4a) of wastewater collected from 98% UGD connection, and the remaining is disposed directly into the environment due to the insufficient design capacity of STP.

Since there is no faecal sludge treatment plant present in the municipality, the common practice of managing the sludge is by dumping into the nearby manhole present in the UGD connections.

TREATMENT:

The Sewage Treatment Plant (STP) located at Gopasandra tank is of the design capacity of 2 MLD. Due to limited capacity, around 58% of the wastewater is directly disposed into Nekkundi lake, leading to the eutrophication of the lake.

Waste water discharge into open ground

Furthermore, as no desilting has been carried out in the existing STP for the past 5 years, the efficiency of the treatment plant is assumed to be 80% (W5a). After partial treatment, water is discharged into Nekkundi lake. Another STP with a design capacity of 6.4 MLD is proposed in the municipality.

There is no FSTP present in the town, thus after desludging the FS from the containment system, it is dumped into the nearest UGD manholes.

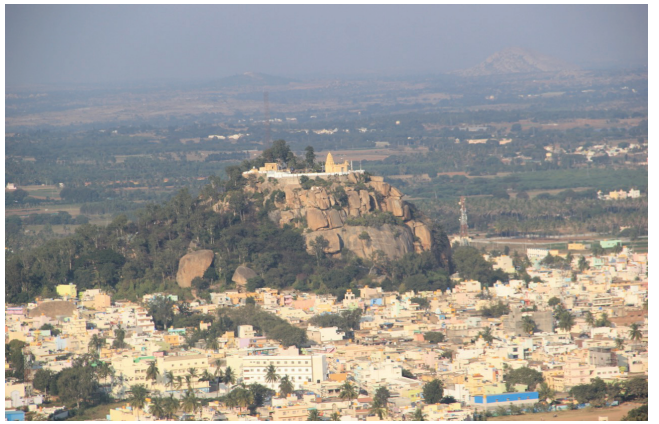
GENERAL CITY INFORMATION

Chintamani is a city in Chintamani Taluk of Chikkaballapur district, Karnataka, India. The city lies between 13.400°N and 78.066°E with an average elevation of 865 m (2838 ft). It is located 38.3 km towards the east from district headquarter Chikkaballapur.

Chintamani City is a City Municipal Council (population falling under 50,000 to 3 lakh) and the administrative boundary is spread over an area of 15.0 1 sq.km divided into 31 wards. The city has a population of 76,068 as per a report released by Census India 2011. The projected population in the year 2021 is estimated to be 88,000.

The local water resource present within the administrative boundary is Kanampalli Chikka Kere spread over an extent of 10 acres, Bhaktharahalli - arasikere (out of the administrative boundary), 6 km away from the city and another source of water is 177 borewells spread across the city. Though the city has both surface and groundwater sources, it is largely dependent on groundwater (80%).

The underground drainage network of the city is 98% (12871 HHs) and the remaining 2% (263 HHs) of ward no. 8 and 9 are unsewered. The water and wastewater scenario are shown in Table 1. The city consists of 2MLD capacity of waste stabilization pond which is located at Gopasandra Tank, and it is spread over an area of 4 acres. The technology used in this STP has Nature-based Waste Stabilization Pond consisting of an anaerobic pond. There is no FSTP (Faecal Sludge Treatment Plant) in the city.



DATA AND ASSUMPTIONS

A variety of data sources were used to determine the most reasonable estimates for percentages of excreta slow for the SFD matrix. The transect walks, observations, key informant interviews, community engagement were used for data collection purposes because of the limited availability of data in secondary sources.

LIST OF DATA SOURCES

- Baseline Survey /Consultation with the STP operators
- Community engagement in Ward nos. 8 and 9
- Discussion with CMC, Chintamani officials : Assistant Executive Engineer, UGD Supervisor

Supported by :

BMZ Federal Ministry for Economic Cooperation and Development

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ಪೌರಾಡಳಿತ ನಿರ್ದೇಶನಾಲಯದ ಅಧಿಕೃತ ಜಾಲತಾಣ

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BORDA

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The Shit Flow Diagram was created using the **SFD Lite Graphic Generator** on the Susana website

https://sfd.susana.org/