Metadata & Data Standards for Rural Drinking Water and Sanitation

Ministry of Drinking Water & Sanitation

MDDS çRDWS: 01
Version1.0
September 2016

Metadata of MDDS-RDWS

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11.	Contributors	Refer Section 10
12.	Brief Description	This document lists and describes the entities and data elements that may be standardized for enabling semantic interoperability among e-governance applications dealing with rural drinking water and sanitation in India

S.No.	Data elements	Values
13.	Target Audience	- All stakeholders in central and state govt. as well as any other organization involved in design, development and implementation of eGovernance solutions in the drinking water and sanitation domain - Administrators - Service providers - Disaster Management Groups - Academia / Researchers - NGOs
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22.	Relation	(1) MDDS Demographic : 01 Version 1.1 (2) Institutional mechanism for formulation of Domain Specific Metadata and data Standards

Amendments Log

Old Version No., Month and Year	Briefing about change request and action taken	New version No. month and year	Sections which have been revised / new sections added
MDDS_MoDWS_01 Version : 0.1 July 2015	Apex Committee review comments (section 11)	MDDS_RDWS_01 Version : 1.0 September 2016	4.1 – Modified 15.006 - Added 15.006.005 (Version No) and 15.006.006 (Date of last update) 4.2 – Same as above 4.3 – Same as above 4.4 – Added data element 15.009.006 - Programme_InitiatorName 4.10 – Modified 15.019 – Added 4 - Institutional Use in Data Element 15.015.004 4.14 – Modified 15.019 – Specified max size (p) in data element 15.019.002 4.15 – Modified 15.020 – Specified max size(p) in data element 15.020.005 4.16 – Modified 15.021 - Specified max size (p) in data element 15.021.003 5.2 – Definition modified for Edu_inst_type (15.002.003) 5.4 – Modified 15.004.003 - Max Size increased to 250 6.4 – Added metadata of 15.009.006

			6.9 - Specified max size (p) in data element 15.015.001 6.10 – Modified Metadata of 15.015.004 (Supply_To) 6.14 – Modified Metadata of 15.019.002 (Water_TreatmentPlant_ID) 6.15 - Specified max size (p) in data element 15.020.005 6.16 - Specified max size (p) in data element 15.021.003 11- Added Review Comments of Apex committee and compliance

Table of Contents

1. Introduction 8
2. Scope and Objective 9
3. Metadata Definitions – Sanitation 11
3.1 Entity Name: Toilet (15.001) 11
3.2 Entity Name: Educational Institute (15.002) 15
3.3 Entity Name: Waste (15.003) 18
3.4 Entity Name: Survey (15.004) 20
3.5 Entity Name: IEC Campaign (15.005) 22
4 **Metadata Definitions – Drinking Water 24**
4.1 Entity Name: Block (15.006) 24
4.2 Entity Name: Gram Panchayat (15.007) 25
4.3 Entity Name: Habitation (15.008) 27
4.4 Entity Name: Programme (15.009) 29
4.5 Entity Name: Programme Component (15.010) 30
4.6 Entity Name: Scheme Category (15.011) 31
4.7 Entity Name: Scheme Type (15.012) 32
4.8 Entity Name: Scheme (15.013) 33
4.9 Entity Name: Drinking Water Source (15.014) 36
4.10 Entity Name: Water Supply (15.015) 38
4.11 Entity Name: Water Testing Lab (15.016) 40
4.12 Entity Name: Water Quality Testing (15.017) 44
4.13 Entity Name: Water Quality Parameter (15.018) 45
4.14 Entity Name: Water Treatment Plant (15.019) 47
4.15 Entity Name: Fund Sanction (15.020) 49
4.16 Entity Name: Fund Release (15.021) 51
4. Metadata of Data Elements – Sanitation 53
5. Metadata of Data Elements – Drinking Water 73
7 Annexure – I: Definitions & Acronyms 121
7.1 Definitions 121
7.2. Acronyms 124
8. Annexure – II: Code Directories along with their ownership and sample values 126
8.1 List of Code Directories 126
8.2 Sample Values of Code Directories – Sanitation Section 127
CD15.001– Toilet Super Structure 127
CD15.002– Toilet Location Owner 128
CD15.003 – Toilet Type 129
CD15.004– Waste Classification 130
CD15.005– Waste Disposal 132

CD15.006 Waste Type 133
CD15.007 Survey Level 134
CD15.008 Survey Audience 135
CD15.009 Survey Type 135
CD15.010 IEC Area 136
CD15.011 IEC Target Audience 137
CD15.012 IEC Techniques 138
8.3 Sample Values of Code Directories – Drinking Water Section 139
CD15.013 Parameter ID 139
CD15.014 Water Treatment Method 142
CD15.015 Parameter Unit (for Measurement) 144
9. Annexure – III IS-10500 Standard of BIS 145
10. List of Contributors - Expert Committee Members 146
11. Apex Body Review Comments 147

1. Introduction

1.1. The Government of India has launched the Digital India programme with the intent to support the growth of e-Governance and improved delivery of services within the country. The programme envisages creation of right environments to implement G2G, G2B, G2E, and G2C services.

1.2. The Ministry of Electronics and Information Technology (MeitY), Government of India (GoI) is driving the Digital India programme which seeks to create the right governance and institutional mechanisms for ensuring that the government services are made available to citizens electronically by leveraging technology and improving online infrastructure. To achieve this, standards in e-Governance have to be defined, which will help ensure sharing of information and seamless interoperability of data across the various government departments and their e-Governance applications.

1.3. Semantic interoperability among e-Governance applications requires that precise meaning of exchanged information is understood across applications. There is a need for commonly accepted definitions / data definitions for the various elements used in Governance systems. Hence, Standardization of data entities / their attributes (data elements[1]) is the prerequisite for systematic development of e-Governance applications. This document is an attempt towards integration of the various e-governance applications being used in the Rural Drinking Water and Sanitation domain. It is the first published, Standards for the Rural Drinking Water & Sanitation domain, which has been prepared by the expert committee constituted by the Ministry of Drinking Water and Sanitation, after consultations with various stakeholders particularly the state line departments of the Ministry and has been approved by the Apex Committee.

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1 The term **data element** will be used for attribute of an entity.

1.4. The standard document MDDS Demographic Ver 1.1, published by MeitY (previously DeitY), has been extensively referred to.

1.5. The Institutional mechanism for formulation of Domain Specific Metadata and data Standards published by MeitY has also been used as a guiding document for this initiative.

2. Scope and Objective

2.1. The entities pertaining to the Rural Drinking Water and Sanitation (RDWS) domain and the data elements required for uniquely identifying these entities are to be identified for standardization

2.2. Those data elements which will be sufficient to **uniquely** describe a particular entity and are **not required** just for one application, need to be identified. Such data elements are to be further categorized as below

2.2.1 Data elements, which are common across the applications **within the domain**

2.2.2 Data elements, which are common **across other domains also**

2.3 Further, these data elements are also to be categorized into one of the following ways:

2.3.1 Prospective Generic Data Element Within the RDWS Domain (PGWD)

2.3.2 Prospective Generic Data Element Across all Domains (PGAD)

2.3.3 Customized for RDWS Domain from already standardized generic data element (C)

Hence, whenever that entity/ data element is (are) referred in other applications within the RDWS domain or across other related domains, it can be used in the standard format. This is the mandatory step towards achieving seamless interoperability among the different applications within/across the domain.

It may also be noted that values in the code directories are completely domain specific

and may be enhanced by other Ministries/Departments if required.

2.4 This document was circulated to all stakeholders for their valuable comments and suggestions on the following:

2.4.1 Are the definitions of domain entities unambiguous and complete?

2.4.2 Do the data elements describe the entity adequately in context with the above discussion? If not, additional data elements to be suggested.

2.4.3 Do the names of data elements correctly reflect the semantics of the element? If not, an alternate should be suggested.

2.4.4 Are the definitions of data elements complete and comprehensive?

2.4.5 Examination of the data type of a data element for correctness.

2.4.6 Important issues have to be highlighted in the Remarks column.

In this document, there is mention of assigning unique codes to geographical locations (like Block, Village). While assignment of unique codes to these data elements, for various cases viz. new creation, split and merger, guidelines used in "MDDS Demographic: 01, Version: 1.1, November 2011" will be followed.

The term "Village Location Code" is used in Administrative Scope and Village definition of Generic Data Element - Land Region Code (G02.01) may be considered for enhancement or modification by Domain Committee, in order to accommodate 'Administrative villages'. This requirement exists in multiple domains.

After several rounds of deliberations with stakeholders and committee members, the document was finalized and forwarded for approval of Apex Committee. The comments received thereafter, have been reviewed and incorporated wherever feasible, in the present version.

It is to be noted that this document will continue to evolve and will be updated when required, after further approval from Domain and Apex committee, is obtained for the same.

Definitions given in this document are totally in context of Rural Drinking Water and Sanitation domain, allocated to the Ministry of Drinking Water and Sanitation, Government of India

3. Metadata Definitions – Sanitation

3.1 Entity Name: Toilet (15.001)

Entity Description: A toilet is a sanitation fixture used primarily for the disposal of human excreta & urine, often found in a small room referred to as a toilet / lavatory / latrine. Toilets can also be mobile units (used for disposal of human excreta / urine) which are generally used in places of large public gathering, pilgrimage spots / routes during festivals, celebrations, disasters, etc.

(***Source:*** Wikipedia, MDWS)

Name of Data Element/ Ref. No. specific to Entity in Domain	Description of Data element	Data Format	Maximum Size	Type of Data elements (PGWD/PGAD/C)	Remarks
Toilet_ Base 15.001.001	Toilet Base is a platform on which the toilet-pan / commode is mounted and fixed. Toilet base can either be: 1 - **Stationary :** Base is fixed to the ground 2 - **Mobile:** Base is movable (for example Mobile toilet vans)	Integer	1	PGWD	
Toilet_ Usage 15.001.002	Toilets exist at home / office / schools / public places / etc., which could have the following ownership / usage criteria: 1 - Private 2 - Public Free	Integer	1	PGWD	

Name of Data Element/ Ref. No. specific to Entity in Domain	Description of Data element	Data Format	Maximum Size	Type of Data elements (PGWD/PGAD/C)	Remarks
	3 - Public Paid				
Toilet_ Super Structure 15.001.003	A toilet super structure is basically meant to provide adequate privacy to the toilet users. It is the part of the toilet above the ground, which comprises of the walls, door, roof, etc. The various types of materials used for toilet super structures, as defined by MDWS are placed as Code Directory CD15.001	Integer	2	PGWD	
Toilet _ Status 15.001.004	Toilet Status is either : 1 - Functional 2 - Functional, but not in use 3 - Defunct Toilet Status is said to be ñFunctò if the toilet is in proper working condition and is fit for use. [ñWorking Condi parts of the toilet viz. squatting pan / commode, sewage handling unit (pit), drain pipe, etc. are all properly functional,	Integer	1	PGWD	

Name of Data Element/ Ref. No. specific to Entity in Domain	Description of Data element	Data Format	Maximum Size	Type of Data elements (PGWD/PGAD/C)	Remarks
	and the super structure is intact.] • ñFunctional, b implies that the toilet is functional, and in proper working condition, but the beneficiaries are not willing to use it. • Toilet is said is not fit for use.				
Toilet_ Location Owner 15.001.005	Defines the location where the ñToiletò exists Toilet) or ñName of Mobile Toilet). Values as per Code Directory CD15.002	Integer	1	PGWD	
Toilet_ User 15.001.006	Toilets have different specifications such as width, breadth, height, and depth of the pan / commode for different types / gender / age group of toilet users. Toilets may be used by: **1 - Physically Handicapped (PHY):** any Individual with loss of or failure to develop a specific	Integer	1	PGWD	

Name of Data Element/ Ref. No. specific to Entity in Domain	Description of Data element	Data Format	Maximum Size	Type of Data elements (PGWD/PGAD/C)	Remarks
	bodily function or functions, whether of movement, sensation, coordination, or speech, but excluding mental impairments or disabilities. **2 - Senior Citizen:** any person being a citizen of India, who has attained the age of sixty years or above. **3 - Baby:** any child up to the age of 3 years or below. Baby friendly toilets are generally built in Anganwadis. **4 - Child:** any child between the ages of 3 years to 6 years. Child friendly toilets are generally built in schools 5 - **General:** All types of general toilet users.				
Toilet_ Type 15.001.007	Toilets differ in the design of pan or sewage handling unit. Lists of various types of toilets used are placed as Code Directory CD15.003	Integer	2	PGWD	

3.2 Entity Name: Educational Institute (15.002)

Entity Description: In the context of MDWS, an Educational Institution is a place which children of different age group(s) attend, in order to gain education. These may include preschools, nursery, elementary, primary, secondary, and senior secondary schools. The scope of the domain is limited to Schools only, hence, other educational institutes eg. Colleges, are not defined here.

Also, Educational Institutes come under the purview of the Ministry of Human Resource & Development, hence, the data elements which have been proposed here, may be further examined and owned by MHRD.

(***Source:*** Wikipedia, MDWS)

Name of Data Element/ Ref. No. specific to Entity in Domain	Description of Data element	Data Format	