|  |
| --- |
| **Data Modeling Report Clarity**  Clarity Data Model (Version 2)  Version 1.0 ● Proposed |
| |  | | --- | |  | | Date/Time Generated: | 19.12.2018 11:58:04 | | Author: | Heinrich Humer |   EA Repository : K:\emikat.clarity\Analyse\ElementsAtRisc.eap |
| |  |  | | --- | --- | | **CREATED WITH** |  | |

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# **C****larity Data Model (Version 2)**

*Package «DataModel» in package 'Oracle'*

Updated Version of data model for the ELEMENTS\_AT\_RISK and RISK/IMPACT calculation

## **Logical Model diagram**

*Data Modeling diagram in package 'Clarity Data Model (Version 2)'*



Logical Model

## **DAMAGE\_CLASSIFICATION**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the meaning of the different damage classes in the context of an IMPACT\_CASE

DAMAGE\_CLASSIFICATION

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| DAMAGE\_CLASS\_ID | NUMBER(8) | True | Generated Primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| IMPACT\_CASE\_ID | NUMBER(8) | False | Reference to IMPACT\_CASE |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL\_ID | NUMBER(8) | False | Reference to DAMAGE\_LEVEL |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(20) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_DAMAGE\_CLASS\_01 | DAMAGE\_CLASS\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_DAMAGE\_CLASS\_DAMAGE\_01 | DAMAGE\_LEVEL\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_DAMAGE\_CLASS\_IMPACT\_01 | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_DAMAGE\_CLASS\_DAMAGE\_LEVE\_01 | DAMAGE\_LEVEL\_ID | DAMAGE\_LEVEL(DAMAGE\_LEVEL\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_DAMAGE\_CLASS\_IMPACT\_CASE\_01 | IMPACT\_CASE\_ID | IMPACT\_CASE(IMPACT\_CASE\_ID) |

## **DAMAGE\_LEVEL**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the damage levels on a generic level

DAMAGE\_LEVEL

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL\_ID | NUMBER(8) | True | Defines the ID for damage level (1..6) |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(20 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(10 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| COLOR | VARCHAR2(20) | False | default color name (red, green, blue, ...) |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_DAMAGE\_LEVEL | DAMAGE\_LEVEL\_ID |  |

## **ELEMENTS\_AT\_RISK\_TYPE**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the types of elements at Risk.

Example: Population, Buildings

ELEMENTS\_AT\_RISK\_TYPE

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| EAR\_TYPE\_ID | NUMBER(8) | True | Primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50 CHAR) | False | Name of the elementAtRisc type definition  Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| QUANTITY\_UNIT | VARCHAR2(20) | False | what is the unit of measurement the magnitude of content |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| ELEMENTS\_AT\_RISK\_CLASS\_PK | EAR\_TYPE\_ID |  |

## **EMISSIONS\_SCENARIO\_TYPE**

*Database table in package 'Clarity Data Model (Version 2)'*

EMISSIONS\_SCENARIO\_TYPE

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| EMISSIONS\_SCENARIO\_ID | NUMBER(8) | True |  |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(20) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_EMISSIONS\_SC\_01 | EMISSIONS\_SCENARIO\_ID |  |

## **EXPOSURE\_LAYER\_MD**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of the data package for the exposure data

EXPOSURE\_LAYER\_MD

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| EXPOSURE\_LAYER\_ID | NUMBER(8) | True | Primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(10 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ACCESS\_METHODE | VARCHAR2(50) | False | Method for data access (wcs/wms/...) |

|  |  |  |  |
| --- | --- | --- | --- |
| ACCESS\_ADDRESS | VARCHAR2(132 BYTE) | False | Address to locate the data layer itselve  Properties:  LengthType = BYTE |

|  |  |  |  |
| --- | --- | --- | --- |
| DATAPACKAGE\_RESSOURCE\_ID | VARCHAR2(50) | False | ID of the data package definition |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_EXPOSURE | EXPOSURE\_LAYER\_ID |  |

## **HAZARD\_INDEX\_TYPE**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the taxonomy of supported indexes of hazard

HAZARD\_INDEX\_TYPE

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| HAZARD\_INDEX\_TYPE\_ID | NUMBER(8) | True |  |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_TYPE\_ID | NUMBER(8) | False | Reference to HAZARD\_TYPE |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ALIAS | VARCHAR2(20 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_HAZARD\_TYPE | HAZARD\_INDEX\_TYPE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_HAZARD\_INDEX\_HAZARD\_01 | HAZARD\_TYPE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_HAZARD\_INDEX\_HAZARD\_TYPE\_01 | HAZARD\_TYPE\_ID | HAZARD\_TYPE(HAZARD\_TYPE\_ID) |

## **HAZARD\_LAYER\_MD**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the list of HAZARD layers or Resources in the data package

HAZARD\_LAYER\_MD

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| HAZARD\_ID | NUMBER(8) | True | Primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50 CHAR) | False | Name of the Hazard  Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR(10) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False | Description of hazards |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_INDEX\_TYPE\_ID | NUMBER(8) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| TIME\_PERIOD\_ID | NUMBER(8) | False | time to a defined time period (TIME\_PERIOD) |

|  |  |  |  |
| --- | --- | --- | --- |
| EMISSION\_SCENARIO\_ID | NUMBER(8) | False | ID to the emission scenario |

|  |  |  |  |
| --- | --- | --- | --- |
| ACCESS\_METHODE | VARCHAR2(50) | False | Method for accessing data |

|  |  |  |  |
| --- | --- | --- | --- |
| ACCESS\_ADDRESS | VARCHAR2(132) | False | Address to acces the real data (WCS, WFS, filename, ...) |

|  |  |  |  |
| --- | --- | --- | --- |
| DATAPACKAGE\_RESSOURCE\_ID | VARCHAR2(50) | False | ID to the ressource definition in the data package |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_Table1 | HAZARD\_ID |  |

## **HAZARD\_SZENARIO**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of the supported different scenarios on HAZARD layers.

Its defined for the combination of (HAZARD\_INDEX\_TYPE\_ID, TIME\_PERIOD\_ID and EMISSION\_SZENARIO\_ID) and associates a HAZARD\_LAYER\_MD defintion to it, to give the information, how to access the data.

HAZARD\_SZENARIO

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 19.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| HAZARD\_SZENARIO\_ID | NUMBER(8) | True | Autogenerated primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_INDEX\_TYPE\_ID | NUMBER(8) | False | Reference to HAZARD\_INDEX\_TYPE |

|  |  |  |  |
| --- | --- | --- | --- |
| TIME\_PERIOD\_ID | NUMBER(8) | False | Reference to TIME\_PERIOD |

|  |  |  |  |
| --- | --- | --- | --- |
| EMISSIONS\_SCENARIO\_ID | NUMBER(8) | False | Reference to EMISSIONS\_SCENARIO\_TYPE |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_LAYER\_ID | NUMBER(8) | False | Referenced and used HAZARD\_LAYER to access the real data |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_ID | NUMBER(8) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_HAZARD\_SZENA\_01 | HAZARD\_SZENARIO\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_HAZARD\_SZENA\_EMISSIO01 | EMISSIONS\_SCENARIO\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_HAZARD\_SZENA\_HAZARD\_01 | HAZARD\_INDEX\_TYPE\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_HAZARD\_SZENA\_HAZARD\_02 | HAZARD\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_HAZARD\_SZENARIO\_TIME01 | TIME\_PERIOD\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_HAZARD\_SZENARIO\_TIME\_PERIOD | TIME\_PERIOD\_ID | TIME\_PERIOD(TIME\_PERIOD\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_HAZARD\_SZENA\_EMISSIONS\_S\_01 | EMISSIONS\_SCENARIO\_ID | EMISSIONS\_SCENARIO\_TYPE(EMISSIONS\_SCENARIO\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_HAZARD\_SZENA\_HAZARD\_LAYE\_01 | HAZARD\_ID | HAZARD\_LAYER\_MD(HAZARD\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_HAZARD\_SZENA\_HAZARD\_INDE\_01 | HAZARD\_INDEX\_TYPE\_ID | HAZARD\_INDEX\_TYPE(HAZARD\_INDEX\_TYPE\_ID) |

## **HAZARD\_TYPE**

*Database table in package 'Clarity Data Model (Version 2)'*

Defines the taxonomy of Hazards

HAZARD\_TYPE

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| HAZARD\_TYPE\_ID | NUMBER(8) | True |  |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_HAZARD\_TYPE | HAZARD\_TYPE\_ID |  |

## **IMPACT\_CASE**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of correlation functionality between HAZARD\_INDEX\_TYPEs and ELEMENT\_AT\_RISK\_TYPEs.

Eg.: "There is a IMPACT\_CASE defined for Population and HeatWaveDuration"

IMPACT\_CASE

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| IMPACT\_CASE\_ID | NUMBER(8) | True | Generated Primary Key |

|  |  |  |  |
| --- | --- | --- | --- |
| EAR\_TYPE\_ID | NUMBER(8) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_INDEX\_TYPE\_ID | NUMBER(8) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(20) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_IMPACT\_CASE | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_IMPACT\_CASE\_ELEMENTS01 | EAR\_TYPE\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_IMPACT\_CASE\_HAZARD\_I01 | HAZARD\_INDEX\_TYPE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_IMPACT\_CASE\_HAZARD\_INDEX\_01 | HAZARD\_INDEX\_TYPE\_ID | HAZARD\_INDEX\_TYPE(HAZARD\_INDEX\_TYPE\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_IMPACT\_CASE\_ELEMENTS\_AT\_\_01 | EAR\_TYPE\_ID | ELEMENTS\_AT\_RISK\_TYPE(EAR\_TYPE\_ID) |

## **IMPACT\_RESULT**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of the table for holding the result of IMPACT/DAMAGE calculation

IMPACT\_RESULT

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 19.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| IMPACT\_RESULT\_ID | NUMBER(8) | True | Autogenerated primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| IMPACT\_SCENARIO\_ID | NUMBER(8) | False | Reference to IMPACT\_SCENARIO |

|  |  |  |  |
| --- | --- | --- | --- |
| VULNERABILITY\_CLASS\_ID | NUMBER(8) | False | Reference to VULNERABILITY\_CLASS |

|  |  |  |  |
| --- | --- | --- | --- |
| CELL\_ID | VARCHAR2(20) | False | ID of the raster cell |

|  |  |  |  |
| --- | --- | --- | --- |
| EXPOSED\_QUANTITY | FLOAT(126) | False | Quantity of the exposed ELEMENT\_OD RISK in this raster cell |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL1\_P | FLOAT(126) | False | Probability of Damage level 1 |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL2\_P | FLOAT(126) | False | Probability of Damage level 2 |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL3\_P | FLOAT(126) | False | Probability of Damage level 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL4\_P | FLOAT(126) | False | Probability of Damage level 4 |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL5\_P | FLOAT(126) | False | Probability of Damage level 5 |

|  |  |  |  |
| --- | --- | --- | --- |
| DAMAGE\_LEVEL6\_P | FLOAT(126) | False | Probability of Damage level 6 |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_IMPACT\_RESUL\_01 | IMPACT\_RESULT\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_IMPACT\_RESUL\_IMPACT\_01 | IMPACT\_SCENARIO\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_IMPACT\_RESUL\_VULNERA01 | VULNERABILITY\_CLASS\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_IMPACT\_RESUL\_IMPACT\_SCEN\_01 | IMPACT\_SCENARIO\_ID | IMPACT\_SCENARIO(IMPACT\_SCENARIO\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_IMPACT\_RESUL\_VULNERABILI\_01 | VULNERABILITY\_CLASS\_ID | VULNERABILITY\_CLASS(VULNERABILITY\_CLASS\_ID) |

## **IMPACT\_SCENARIO**

*Database table in package 'Clarity Data Model (Version 2)'*

IMPACT\_SCENARIO

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 19.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| IMPACT\_SCENARIO\_ID | NUMBER(8) | True | Auto generated primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| IMPACT\_CASE\_ID | NUMBER(8) | False | Reference to IMPACT\_CASE |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_SCENARIO\_ID | NUMBER(8) | False | Reference to HAZARD\_SCENARIO |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| HAZARD\_SZENARIO\_ID | NUMBER(8) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_IMPACT\_SCENA\_01 | IMPACT\_SCENARIO\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_IMPACT\_SCENA\_HAZARD\_01 | HAZARD\_SZENARIO\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_IMPACT\_SCENARIO\_IMPA01 | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_IMPACT\_SCENARIO\_IMPACT\_CASE | IMPACT\_CASE\_ID | IMPACT\_CASE(IMPACT\_CASE\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_IMPACT\_SCENA\_HAZARD\_SZEN\_01 | HAZARD\_SZENARIO\_ID | HAZARD\_SZENARIO(HAZARD\_SZENARIO\_ID) |

## **TIME\_PERIOD**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of different time periods

TIME\_PERIOD

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 18.12.2018. Last modified 18.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| TIME\_PERIOD\_ID | NUMBER(8) | True |  |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000 CHAR) | False | Properties:  LengthType = CHAR |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(20) | False |  |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_TIME\_PERIOD | TIME\_PERIOD\_ID |  |

## **VULNERABILITY\_CLASS**

*Database table in package 'Clarity Data Model (Version 2)'*

Classes of vulnerability for one specific ElementAtRisc.

Example: AgeGroup > 65

Age group 0-14

Age group 15-64

This classes have to be complementary.

VULNERABILITY\_CLASS

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 19.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| VULNERABILITY\_CLASS\_ID | NUMBER(8) | True | Auto generated Primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| IMPACT\_CASE\_ID | NUMBER(8) | False | Reference to IMPACT\_CASE |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| ACRONYM | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| EXPOSURE\_LAYER\_ID | NUMBER(8) | False | Use this Exposure Layer definition for accessing the data for this vulnerability class |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| VULNERABILITY\_CLASS\_PK | VULNERABILITY\_CLASS\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_VULNERABILIT\_EXPOSUR01 | EXPOSURE\_LAYER\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_VULNERABILIT\_IMPACT\_01 | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» VULNERABILIT\_ELEMENTSATR\_FKI | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_VULNERABILIT\_EXPOSURE\_LA\_01 | EXPOSURE\_LAYER\_ID | EXPOSURE\_LAYER\_MD(EXPOSURE\_LAYER\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_VULNERABILIT\_IMPACT\_CASE\_01 | IMPACT\_CASE\_ID | IMPACT\_CASE(IMPACT\_CASE\_ID) |

## **VULNERABILITY\_FUNCTION**

*Database table in package 'Clarity Data Model (Version 2)'*

Definition of Vulnerability function iin dependence of IMPACT\_CASE and VULNERABILITY\_CLASS

VULNERABILITY\_FUNCTION

Version 1.0 Phase 1.0 Proposed

Heinrich Humer created on 19.12.2018. Last modified 19.12.2018

DBMS Oracle

| **COLUMN NAME** | **DATATYPE** | **NOT NULL** | **COMMENTS** |
| --- | --- | --- | --- |
| FUNCTION\_ID | NUMBER(8) | True | Autogenerated primary key |

|  |  |  |  |
| --- | --- | --- | --- |
| IMPACT\_CASE\_ID | NUMBER(8) | False | Reference to IMPACT\_CASE |

|  |  |  |  |
| --- | --- | --- | --- |
| VULNERABILITY\_CLASS\_ID | NUMBER(8) | False | Reference to VULNERABILITY\_CLASS |

|  |  |  |  |
| --- | --- | --- | --- |
| NAME | VARCHAR2(50) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| DESCRIPTION | VARCHAR2(2000) | False |  |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL1 | VARCHAR2(500) | False | Definition of function for Damage Level 1 in the form:  x1 y1  x2 y2  x3 y3  x4 y4  x5 y5  Point are seperated by LF, coordinate values by SPACE.  Use Decimal POINT (12.345) |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL2 | VARCHAR2(500) | False | Definition of function for Damage Level 2 |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL3 | VARCHAR2(500) | False | Definition of function for Damage Level 3 |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL4 | VARCHAR2(500) | False | Definition of function for Damage Level 4 |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL5 | VARCHAR2(500) | False | Definition of function for Damage Level 5 |

|  |  |  |  |
| --- | --- | --- | --- |
| FUNCTIONDEF\_DL6 | VARCHAR2(500) | False | Definition of function for Damage Level 6 |

|  |  |  |
| --- | --- | --- |
| **PRIMARY KEY NAME** | **COLUMNS** | **COMMENTS** |
| PK\_VULNERABILITY\_01 | FUNCTION\_ID |  |

|  |  |  |
| --- | --- | --- |
| **TYPE / NAME** | **COLUMNS** | **COMMENTS** |
| «index» IXFK\_VULNERABILIT\_IMPACT\_01 | IMPACT\_CASE\_ID |  |

|  |  |  |
| --- | --- | --- |
| «index» IXFK\_VULNERABILIT\_VULNERA01 | VULNERABILITY\_CLASS\_ID |  |

|  |  |  |
| --- | --- | --- |
| **FOREIGN KEY NAME** | **COLUMNS** | **REFERENCES** |
| FK\_VULNERABILIT\_VULNERABILI\_01 | VULNERABILITY\_CLASS\_ID | VULNERABILITY\_CLASS(VULNERABILITY\_CLASS\_ID) |

|  |  |  |
| --- | --- | --- |
| FK\_VULNERABILIT\_IMPACT\_CASE\_02 | IMPACT\_CASE\_ID | IMPACT\_CASE(IMPACT\_CASE\_ID) |