ABBREVIATIONS

AHP  Analytical Hierarchy process
ANN  Artificial nural network
ASCE  American society of civil engineering
AWWA  American water works association
AwwaRF  American water works research foundation
BABE  Burst and background estimate
BWS  Bristol water’s
CARL  Current annual real losses
C.I  Cast iron
C.I  Consistency index
CR  Consistency ratio
DSS  Decision support system
D.I  Ductile iron
EC  European country
EIO  Economic input output
EPA  Environmental protection agencies
ESI  Environmental sustainability index
FAVED  Fixed area variable area discharge
GA  Genetic algorithm
GIS  Geographic information system
ILI  Infrastructure leakage index
IUWM  Integrated Urban Water management
IWRM  Integrated water resource management
IWA  International water association
LCA  Life cycle analysis
MAUT  Multi attribute utility theory
MCDA  Multi Criteria Decision aid
MCS  Monte carlo simulation
MFA  Material flow analysis
MLD  Million liter per day
MLRA  Multiple linear regression modeling
M.S  Mild steel
NRC  National research council of Canada
NRW  Non revenue water
PI  Performance indicator
PNN  Probabilistic neural network
PRA  Poisson regression analysis
PVC  Polyvinyl chloride
R.I  Random consistency index
SAW  Simple additive weightage
SDI  Sustainable development indicator
SI  Sustainability index
SMART  Simple multi attribute rating technique
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>SMC</td>
<td>Surat Municipal Corporation</td>
</tr>
<tr>
<td>TBL</td>
<td>Triple bottom line</td>
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<tr>
<td>UARL</td>
<td>Unavoidable annual real losses</td>
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<tr>
<td>UBRL</td>
<td>Unavoidable background real losses</td>
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<tr>
<td>UFW</td>
<td>Un accounted for water</td>
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<tr>
<td>UNEP</td>
<td>United nations environmental protection</td>
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<td>UV</td>
<td>Ultraviolet</td>
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<tr>
<td>UWM</td>
<td>Urban water management</td>
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<tr>
<td>UWS</td>
<td>Urban water system</td>
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<tr>
<td>WDS</td>
<td>Water distribution system</td>
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<tr>
<td>WECD</td>
<td>World Commission on Environment and Development</td>
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<td>WFD</td>
<td>Water framework directives</td>
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<td>WHO</td>
<td>World health organisation</td>
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<td>WRC</td>
<td>Water research commission</td>
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<tr>
<td>WSA</td>
<td>Water system area</td>
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<tr>
<td>WWSA</td>
<td>Waste water system area</td>
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