```xml
<ParameterList name="MueLu">

  <!-- Configuration of the Xpetra operator (fine level) -->
  <ParameterList name="Matrix">
    <Parameter name="PDE equations"                        type="int" value="3"/> <!-- Number of PDE e
quations at each grid node.-->
  </ParameterList>

  <!-- Factory collection -->
  <ParameterList name="Factories">

    <!-- Note that ParameterLists must be defined prior to being used -->
    <ParameterList name="myProlongatorFact">
      <Parameter name="factory"                            type="string" value="GeneralGeometric
PFactory"/>
      <Parameter name="P"                                  type="string" value="myProlongatorFac
t"/>
      <Parameter name="Coarsen"                            type="string" value="2"/>
    </ParameterList>

    <ParameterList name="myRestrictorFact">
      <Parameter name="factory"                            type="string" value="TransPFactory"/>
      <Parameter name="R"                                  type="string" value="myRestrictorFact
"/>
    </ParameterList>

    <ParameterList name="myGeoCoordTransferFact">
      <Parameter name="factory"                            type="string" value="GeometricCoordin
atesTransferFactory"/>
      <!--Parameter name="coarsening_rate"                 type="string" value="myProlongator
Fact"/-->
      <Parameter name="Coarsen"                            type="string" value="2"/>
      <Parameter name="write start"                        type="int"    value="1"/>
      <Parameter name="write end"                          type="int"    value="2"/>
    </ParameterList>

    <ParameterList name="myRAPFact">
      <Parameter name="factory"                            type="string" value="RAPFactory"/>
      <Parameter name="P"                                  type="string" value="myProlongatorFac
t"/>
      <Parameter name="R"                                  type="string" value="myRestrictorFact
"/>
      <ParameterList name="TransferFactories">
        <Parameter name="GeometricCoordinateTransfer"      type="string" value="myGeoCoordTransf
erFact"/>
      </ParameterList>
    </ParameterList>

    <!-- ====================== SMOOTHERS  ====================== -->

    <ParameterList name="myJacobi">
      <Parameter name="factory"                            type="string" value="TrilinosSmoother
"/>
      <Parameter name="type"                               type="string" value="RELAXATION"/>
      <ParameterList name="ParameterList">
        <Parameter name="relaxation: type"                 type="string" value="Jacobi"/>
        <Parameter name="relaxation: sweeps"               type="int"    value="4"/>
        <Parameter name="relaxation: damping factor"       type="double" value="1.0"/>
      </ParameterList>
    </ParameterList>

    <ParameterList name="GaussSeidel">
      <Parameter name="factory"                            type="string" value="TrilinosSmoother
"/>
      <Parameter name="type"                               type="string" value="RELAXATION"/>
      <ParameterList name="ParameterList">
        <Parameter name="relaxation: type"                 type="string" value="Gauss-Seidel"/>
        <Parameter name="relaxation: sweeps"               type="int"    value="4"/>
        <Parameter name="relaxation: damping factor"       type="double" value="1.0"/>
      </ParameterList>
    </ParameterList>
```

```xml
    <ParameterList name="SymGaussSeidel">
      <Parameter name="factory"                            type="string" value="TrilinosSmoother
"/>
      <Parameter name="type"                               type="string" value="RELAXATION"/>
      <ParameterList name="ParameterList">
        <Parameter name="relaxation: type"                 type="string" value="Symmetric Gauss-
Seidel"/>
        <Parameter name="relaxation: sweeps"               type="int"    value="4"/>
        <Parameter name="relaxation: damping factor"       type="double" value="1.0"/>
      </ParameterList>
    </ParameterList>

  </ParameterList>

  <!-- Definition of the multigrid preconditioner -->
  <ParameterList name="Hierarchy">

    <Parameter name="max levels"                         type="int"      value="4"/> <!-- Max
number of levels -->
    <Parameter name="coarse: max size"                   type="int"      value="10"/> <!-- Min
 number of rows on coarsest level -->
    <Parameter name="verbosity"                          type="string"   value="High"/>

    <ParameterList name="All">
      <Parameter name="Smoother"                         type="string"   value="GaussSeidel"/>
      <Parameter name="Nullspace"                        type="string"   value="myProlongatorF
act"/>
      <Parameter name="P"                                type="string"   value="myProlongatorF
act"/>
      <Parameter name="R"                                type="string"   value="myRestrictorFa
ct"/>
      <Parameter name="A"                                type="string"   value="myRAPFact"/>
      <Parameter name="CoarseSolver"                     type="string"   value="DirectSolver"/
>
      <!--Parameter name="coarsening_rate"                 type="string"   value="myProlongat
orFact"/-->
      <Parameter name="Coordinates"                      type="string"   value="myGeoCoordTran
sferFact"/>
    </ParameterList>

    <!-- Export data -->
    <ParameterList name="DataToWrite">
      <Parameter name="Matrices" type="string" value="{0,1}"/>
      <Parameter name="Prolongator" type="string" value="{1}"/>
    </ParameterList>


  </ParameterList>
</ParameterList>
```