```xml
1   <?xml version="1.0" encoding="UTF-8"?>
2   <wsdl:definitions xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/" xmlns:soap=
    "http://schemas.xmlsoap.org/wsdl/soap/" xmlns:http=
    "http://schemas.xmlsoap.org/wsdl/http/" xmlns:xs=
    "http://www.w3.org/2001/XMLSchema" xmlns:soapenc=
    "http://schemas.xmlsoap.org/soap/encoding/" xmlns:mime=
    "http://schemas.xmlsoap.org/wsdl/mime/" xmlns:nts="http://www.ris.eu/nts/4.0.4.0"
     xmlns:tns="http://www.ris.eu/nts.ms/2.0.4.0" targetNamespace=
    "http://www.ris.eu/nts.ms/2.0.4.0" name="NtS-Message-Service">
3     <!--
4        =========================
5        = specification of types =
6        =========================
7     -->
8     <wsdl:types>
9       <!--
10          =======================
11          = xml-schema for types =
12          =======================
13        -->
14        <xs:schema targetNamespace="http://www.ris.eu/nts.ms/2.0.4.0" xmlns:xs=
          "http://www.w3.org/2001/XMLSchema" xmlns:nts="http://www.ris.eu/nts/4.0.4.0"
          xmlns:nts-ms="http://www.ris.eu/nts.ms/2.0.4.0" elementFormDefault=
          "qualified" attributeFormDefault="unqualified" version="2.0.4.0">
15          <!-- import NtS schema -->
16          <xs:import namespace="http://www.ris.eu/nts/4.0.4.0" schemaLocation=
            "http://www.ris.eu/nts/4.0/NtS_XSD_V.4.0.4.0.xsd"/>
17          <!-- query with filters, parameters according to the NtS standard -->
18          <xs:element name="get_messages_query">
19            <xs:complexType>
20              <xs:sequence>
21                <!-- type of message (FTM, WRM, ICEM, WERM) -->
22                <xs:element name="message_type" type="nts-ms:message_type_type"/>
23                <!-- ISRS codes for fairway sections or objects -->
24                <xs:element name="ids" type="nts-ms:id_pair" minOccurs="0" maxOccurs=
                  "unbounded"/>
25                <!-- time of validity -->
26                <xs:element name="validity_period" type="nts:validity_period_type"
                  minOccurs="0"/>
27                <!-- date of publication of the notice -->
28                <xs:element name="dates_issue" type="nts-ms:date_pair" minOccurs="0"
                  maxOccurs="unbounded"/>
29                <!-- optional parameter for paging mechanism -->
30                <xs:element name="paging_request" type="nts-ms:paging_request_type"
                  minOccurs="0"/>
31              </xs:sequence>
32            </xs:complexType>
33          </xs:element>
34          <!-- result to query - can contain
35                  - "nts:RIS_MessageType", arbitrary number, defined in the
                    NtS-xsd (see www.ris.eu)
36                  - "nts-ms:error_code_type", arbitrary number, defined in this
                    schema
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37              - "nts-ms:paging_result_type", optional, defined in this schema
                -->
38      <xs:element name="get_messages_result">
39        <xs:complexType>
40          <xs:sequence>
41            <xs:element name="result_message" type="nts:RIS_Message_Type"
              minOccurs="0" maxOccurs="unbounded"/>
42            <xs:element name="result_error" type="nts-ms:error_code_type"
              minOccurs="0" maxOccurs="unbounded"/>
43            <xs:element name="paging_result" type="nts-ms:paging_result_type"
              minOccurs="0"/>
44          </xs:sequence>
45        </xs:complexType>
46      </xs:element>
47      <!-- type definitions used in request -->
48      <xs:simpleType name="message_type_type">
49        <xs:restriction base="xs:string">
50          <xs:enumeration value="FTM"/>
51          <xs:enumeration value="WRM"/>
52          <xs:enumeration value="ICEM"/>
53          <xs:enumeration value="WERM"/>
54        </xs:restriction>
55      </xs:simpleType>
56      <xs:complexType name="id_pair">
57        <xs:sequence>
58          <xs:element name="id" type="nts:isrs_code_type" minOccurs="1" maxOccurs
              ="2"/>
59        </xs:sequence>
60      </xs:complexType>
61      <xs:complexType name="date_pair">
62        <xs:sequence>
63          <xs:element name="date_start" type="xs:date"/>
64          <xs:element name="date_end" type="xs:date" minOccurs="0"/>
65        </xs:sequence>
66      </xs:complexType>
67      <xs:complexType name="paging_request_type">
68        <xs:sequence>
69          <xs:element name="offset" type="xs:nonNegativeInteger"/>
70          <xs:element name="limit" type="xs:nonNegativeInteger"/>
71          <xs:element name="total_count" type="xs:boolean"/>
72        </xs:sequence>
73      </xs:complexType>
74      <!-- type definitions used in response -->
75      <xs:simpleType name="error_code_type">
76        <xs:restriction base="xs:string">
77          <xs:enumeration value="e010">
78            <xs:annotation>
79              <xs:documentation>Description: message type not supported,
                Explanation: web service does not support the requested message
                type</xs:documentation>
80            </xs:annotation>
81          </xs:enumeration>
82          <xs:enumeration value="e030">
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 83              <xs:annotation>
 84                <xs:documentation>Description: paging parameters inconsistent
                   with messages, Explanation: parameters for paging mechanism do
                   not fit the available messages, e.g. Offset >= Total Count
                   </xs:documentation>
 85              </xs:annotation>
 86            </xs:enumeration>
 87            <xs:enumeration value="e100">
 88              <xs:annotation>
 89                <xs:documentation>Description: syntax error in request,
                   Explanation: request violates the schema for requests
                   </xs:documentation>
 90              </xs:annotation>
 91            </xs:enumeration>
 92            <xs:enumeration value="e110">
 93              <xs:annotation>
 94                <xs:documentation>Description: incorrect message type,
                   Explanation: given message type is not known</xs:documentation>
 95              </xs:annotation>
 96            </xs:enumeration>
 97            <xs:enumeration value="e120">
 98              <xs:annotation>
 99                <xs:documentation>Description: incorrect type-specific
                   parameters, Explanation: type-specific parameters are erroneous
                   </xs:documentation>
100              </xs:annotation>
101            </xs:enumeration>
102            <xs:enumeration value="e130">
103              <xs:annotation>
104                <xs:documentation>Description: incorrect paging parameters,
                   Explanation: given parameters for the paging mechanism are
                   erroneous</xs:documentation>
105              </xs:annotation>
106            </xs:enumeration>
107            <xs:enumeration value="e200">
108              <xs:annotation>
109                <xs:documentation>Description: operation not known, Explanation:
                   the requested operation is unknown</xs:documentation>
110              </xs:annotation>
111            </xs:enumeration>
112            <xs:enumeration value="e300">
113              <xs:annotation>
114                <xs:documentation>Description: data source unavailable,
                   Explanation: data source of the web service for the NtS data is
                   temporarily unavailable</xs:documentation>
115              </xs:annotation>
116            </xs:enumeration>
117            <xs:enumeration value="e310">
118              <xs:annotation>
119                <xs:documentation>Description: too many results for request,
                   Explanation: server is unable to handle number of results
                   </xs:documentation>
120              </xs:annotation>
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121            </xs:enumeration>
122          </xs:restriction>
123        </xs:simpleType>
124        <xs:complexType name="paging_result_type">
125          <xs:sequence>
126            <xs:element name="offset" type="xs:nonNegativeInteger"/>
127            <xs:element name="count" type="xs:nonNegativeInteger"/>
128            <xs:element name="total_count" type="xs:nonNegativeInteger" minOccurs=
               "0"/>
129          </xs:sequence>
130        </xs:complexType>
131      </xs:schema>
132    </wsdl:types>
133    <!--
134      ===========================
135      = specification of messages =
136      ===========================
137    -->
138    <wsdl:message name="get_messages_request">
139      <wsdl:part name="parameters" element="tns:get_messages_query"/>
140    </wsdl:message>
141    <wsdl:message name="get_messages_response">
142      <wsdl:part name="parameters" element="tns:get_messages_result"/>
143    </wsdl:message>
144    <!--
145      ===========================
146      = specification of port type =
147      ===========================
148    -->
149    <wsdl:portType name="NtS_message_service">
150      <wsdl:operation name="get_messages">
151        <wsdl:input message="tns:get_messages_request"/>
152        <wsdl:output message="tns:get_messages_response"/>
153      </wsdl:operation>
154    </wsdl:portType>
155    <!--
156      ===========================
157      = specification of binding =
158      ===========================
159    -->
160    <wsdl:binding name="NtS_message_service_soap_binding" type=
       "tns:NtS_message_service">
161      <soap:binding style="document" transport=
         "http://schemas.xmlsoap.org/soap/http"/>
162      <wsdl:operation name="get_messages">
163        <soap:operation soapAction="http://www.ris.eu/nts.ms/get_messages"/>
164        <wsdl:input>
165          <soap:body use="literal"/>
166        </wsdl:input>
167        <wsdl:output>
168          <soap:body use="literal"/>
169        </wsdl:output>
170      </wsdl:operation>
```

```
171      </wsdl:binding>
172      <!--
173         ===========================
174         = specification of service =
175         ===========================
176      -->
177      <wsdl:service name="NtS_message_service_service">
178        <wsdl:port name="NtS_message_service" binding=
           "tns:NtS_message_service_soap_binding">
179          <soap:address location="http://nts-ms.example.org/NtS_message_service"/>
180        </wsdl:port>
181      </wsdl:service>
182    </wsdl:definitions>
183
```