```
<?xml version="1.0" encoding="UTF-8"?>
<!-- edited with XML Spy v4.0 U (http://www.xmlspy.com) by Christian Søhoel (TietoEnator A/S) -->
<xs:schema targetNamespace="urn:dk:nes:musseldata:v1" xmlns:mussel="urn:dk:nes:musseldata:v1" xmlns:xs="http://www.w3.org/2001/XMLSchema" elementFormDefault="qualified" attributeFormDefault="unqualified">
	<xs:element name="MusselData">
		<xs:annotation>
			<xs:documentation>Root element that constitutes a mussel data report which includes an arbitrary number of DataReports (GPS and sensor data reports) each belonging to particular vessel.</xs:documentation>
		</xs:annotation>
		<xs:complexType>
			<xs:sequence maxOccurs="unbounded">
				<xs:element name="DataReports" type="mussel:DataReportsType">
					<xs:annotation>
	<xs:documentation>Includes one or more DataReport elements each containing a GPS element togehter with one or more sensor elements. Each set of DataReports also includes an identification of the belonging vessel. </xs:documentation>
					</xs:annotation>
				</xs:element>
			</xs:sequence>
			<xs:attribute name="dataSupplier" type="xs:string" use="required">
				<xs:annotation>
					<xs:documentation>Name of the data supplier.</xs:documentation>
				</xs:annotation>
			</xs:attribute>
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                </xs:complexType>
        </xs:element>
        <xs:complexType name="DataReportsType">
                <xs:sequence>
                        <xs:element name="VesselData"
type="mussel:VesselDataType">
                                <xs:annotation>
                                        <xs:documentation>Vessel
identification.</xs:documentation>
                                </xs:annotation>
                        </xs:element>
                        <xs:element name="TransmitterData"
type="mussel:TransmitterDataType">
                                <xs:annotation>
                                        <xs:documentation>Transmitter
identification.</xs:documentation>
                                </xs:annotation>
                        </xs:element>
                        <xs:element name="DataReport"
type="mussel:DataReportType" maxOccurs="unbounded">
                                <xs:annotation>
                                        <xs:documentation>Includes one
sample of the GPS and sensor data onboard the vessel.</xs:documentation>
                                </xs:annotation>
                        </xs:element>
                </xs:sequence>
                <xs:attribute name="transmissionTime" type="xs:dateTime" use="required"/>
        </xs:complexType>
        <xs:complexType name="VesselDataType">
```

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                <xs:sequence>
                    <xs:element name="VisibleId"
type="mussel:HullRegistrationType">
                        <xs:annotation>
                            <xs:documentation>The visible
identification of the vessel.</xs:documentation>
                        </xs:annotation>
                    </xs:element>
                    <xs:element name="EuIdent" type="mussel:CfrType">
                        <xs:annotation>
                            <xs:documentation>The EU CFR
number of the vessel.</xs:documentation>
                        </xs:annotation>
                    </xs:element>
                </xs:sequence>
            </xs:complexType>
            <xs:complexType name="TransmitterDataType">
                <xs:sequence>
                    <xs:element name="TransmitterId"
type="mussel:TransmitterIdType">
                        <xs:annotation>
                            <xs:documentation>Identification
and unique id of the transmitter.</xs:documentation>
                        </xs:annotation>
                    </xs:element>
                    <xs:element name="ManufactorHardwareNo" type="xs:string">
                        <xs:annotation>
                            <xs:documentation>Serial number
of the transmitter hardware.</xs:documentation>
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                                        </xs:annotation>
                                    </xs:element>
                                </xs:sequence>
                            </xs:complexType>
                            <xs:complexType name="DataReportType">
                                <xs:sequence>
                                    <xs:element name="GPS" type="mussel:GPSDataType"
minOccurs="0">
                                        <xs:annotation>
                                            <xs:documentation>One sample
of the GPS time, position, speed and heading.</xs:documentation>
                                        </xs:annotation>
                                    </xs:element>
                                    <xs:element name="Sensors" type="mussel:SensorsType">
                                        <xs:annotation>
                                            <xs:documentation>One sample
of available sensors.</xs:documentation>
                                        </xs:annotation>
                                    </xs:element>
                                </xs:sequence>
                                <xs:attribute name="logTime" type="xs:dateTime" use="required"/>
                            </xs:complexType>
                            <xs:complexType name="SensorsType">
                                <xs:sequence>
                                    <xs:element name="HydraulicSensor"
type="mussel:HydraulicSensorType" maxOccurs="unbounded">
                                        <xs:annotation>
```

<xs:documentation>Hydraulic sensor.</xs:documentation>

</xs:annotation>

</xs:element>

<xs:element name="WinchSensor" type="mussel:WinchSensorType" maxOccurs="unbounded">

<xs:annotation>

<xs:documentation>Winch sensor.</xs:documentation>

</xs:annotation>

</xs:element>

<xs:element name="OtherSensor" type="mussel:OtherSensorType" minOccurs="0" maxOccurs="unbounded">

<xs:annotation>

<xs:documentation>Other sensor - requires specification of the sensor type.</xs:documentation>

</xs:annotation>

</xs:element>

</xs:sequence>

</xs:complexType>

<xs:complexType name="GPSDataType">

<xs:sequence>

<xs:element name="GpsTime" type="xs:dateTime">

<xs:annotation>

<xs:documentation>The GPS data and time in UTC.</xs:documentation>

</xs:annotation>

</xs:element>

<xs:element name="Position" type="mussel:PositionType">

<xs:annotation>
<xs:documentation>Position as latitude and longitude.</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="Speed" type="xs:decimal">
<xs:annotation>
<xs:documentation>The GPS speed as a decimal number. </xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="Heading" type="xs:decimal">
<xs:annotation>
<xs:documentation>The GPS heading as a decimal number.</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
</xs:complexType>
<xs:complexType name="PositionType">
<xs:sequence>
<xs:element name="Latitude" type="mussel:LatitudeType">
<xs:annotation>
<xs:documentation>The latitude as a decimal number between -90 and 90.</xs:documentation>
</xs:annotation>
</xs:element>
<xs:element name="Longitude" type="mussel:LongitudeType">

<xs:annotation>
<xs:documentation>The longitude as a decimal number between -180 and 180.</xs:documentation>
</xs:annotation>
</xs:element>
</xs:sequence>
</xs:complexType>
<xs:complexType name="SensorDataType">
<xs:simpleContent>
<xs:extension base="xs:string">
<xs:attribute name="number" type="xs:nonNegativeInteger" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="TransmitterIdType">
<xs:simpleContent>
<xs:extension base="xs:string">
<xs:attribute name="type" type="mussel:TransmitterType" use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="HydraulicSensorType">
<xs:simpleContent>
<xs:extension base="mussel:SensorDataType"/>
</xs:simpleContent>
</xs:complexType>

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<xs:complexType name="WinchSensorType">
<xs:simpleContent>
<xs:extension base="mussel:SensorDataType"/>
</xs:simpleContent>
</xs:complexType>
<xs:complexType name="OtherSensorType">
<xs:simpleContent>
<xs:extension base="mussel:SensorDataType">
<xs:attribute name="type" type="xs:string"
use="required"/>
</xs:extension>
</xs:simpleContent>
</xs:complexType>
<xs:simpleType name="CfrType">
<xs:annotation>
<xs:documentation>With format AAAXXXXXXXXX where A is an
uppercase letter being the country of first registration within the EU and X being a letter or a number
</xs:documentation>
</xs:annotation>
<xs:restriction base="xs:string">
<xs:length value="12"/>
<xs:pattern value="[A-Z]{3}[a-zA-Z0-9]{9}"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="HullRegistrationType">
<xs:annotation>
<xs:documentation>Side (hull) registration number and letters
of the vessel </xs:documentation>
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                </xs:annotation>
                <xs:restriction base="xs:string">
                        <xs:minLength value="1"/>
                        <xs:maxLength value="14"/>
                </xs:restriction>
        </xs:simpleType>
        <xs:simpleType name="LatitudeType">
                <xs:annotation>
                        <xs:documentation>Latitude expressed in accordance with the WGS84 format used for VMS </xs:documentation>
                </xs:annotation>
                <xs:restriction base="xs:decimal">
                        <xs:minInclusive value="-90"/>
                        <xs:maxInclusive value="90"/>
                </xs:restriction>
        </xs:simpleType>
        <xs:simpleType name="LongitudeType">
                <xs:annotation>
                        <xs:documentation>Longitude expressed in accordance with the WGS84 format used for VMS </xs:documentation>
                </xs:annotation>
                <xs:restriction base="xs:decimal">
                        <xs:minInclusive value="-180"/>
                        <xs:maxInclusive value="180"/>
                </xs:restriction>
        </xs:simpleType>
        <xs:simpleType name="TransmitterType">
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                        <xs:annotation>
                                <xs:documentation>Supported types of
transmitters</xs:documentation>
                        </xs:annotation>
                        <xs:restriction base="xs:string">
                                <xs:enumeration value="sim"/>
                                <xs:enumeration value="other"/>
                        </xs:restriction>
                </xs:simpleType>
</xs:schema>
```