

Nautical Publications – Marine Protected Areas Schema

Schema **mpa.xsd**

Elements

[Applicability](#)

[Authority](#)

[ContactDetails](#)

[InclusionType](#)

[MarineProtectedArea](#)

[MarineService](#)

[NauticalInformation](#)

[NonStandardWorkingDay](#)

[PermissionType](#)

[Recommendations](#)

[Regulations](#)

[RestrictedArea](#)

[Restrictions](#)

[SeaArea](#)

[ServiceHours](#)

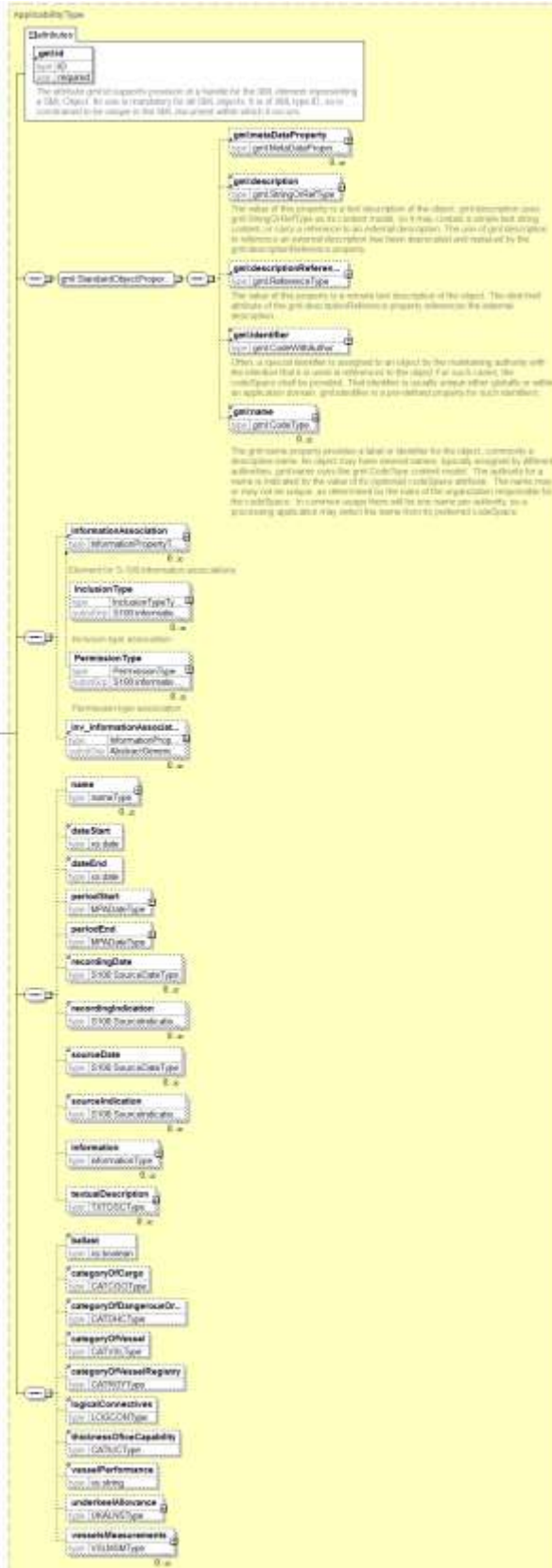
[ShipReport](#)

element Applicability

diagram

Applicability
 type: ApplicabilityType
 base: OASIS Abstract

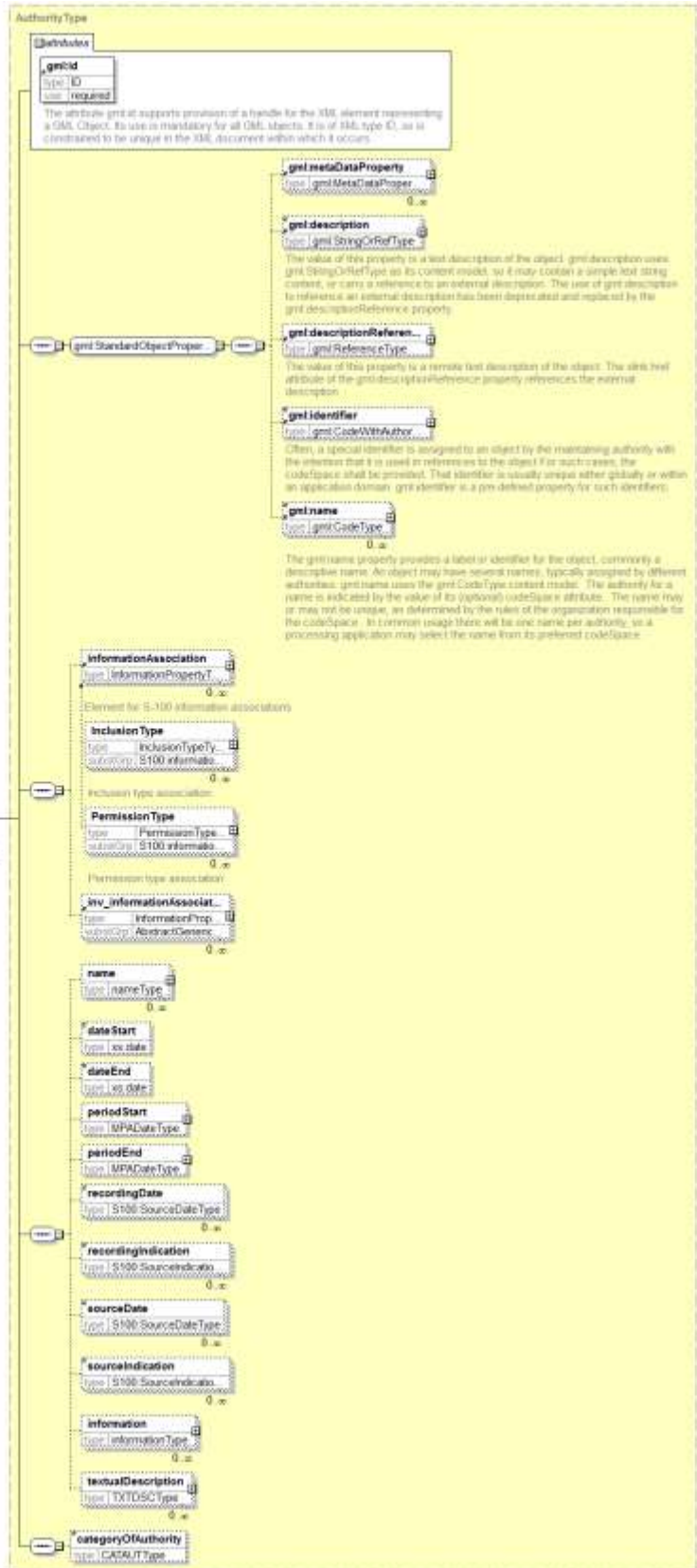
This class is the relationship between several (formal) and (1) the applicability of generic and information object or feature to the record, or (2) the use of a basic, plain, or simple by the object, or (3) package of form used through object.



type	ApplicabilityType					
substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription ballast categoryOfCargo categoryOfDangerousOrHazardousCargo categoryOfVessel categoryOfVesselRegistry logicalConnectives thicknessOfficeCapability vesselPerformance underkeelAllowance vesselsMeasurements					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Describes the relationship between vessel characteristics and: (i) the applicability of an associated information object or feature to the vessel; or, (ii) the use of a facility, place, or service by the vessel; or, (iii) passage of the vessel through an area.					

element Authority

diagram



type	AuthorityType					
substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfAuthority					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation A person or organisation having political or administrative power and control.					

substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription administrativeDivision callName callSign cityName communicationChannel country deliveryPoint emailAddress faxNumber internetAddress maritimeMobileServiceIdentityCode postalCode telegraphAddress telephoneNumber telephoneNumberOutsideWorkingHours telexNumber categoryOfChannelOrFrequencyPreference frequencyPair					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Information on how to reach a person or organisation by postal, internet, telephone, telex and radio systems.					

element **InclusionType**

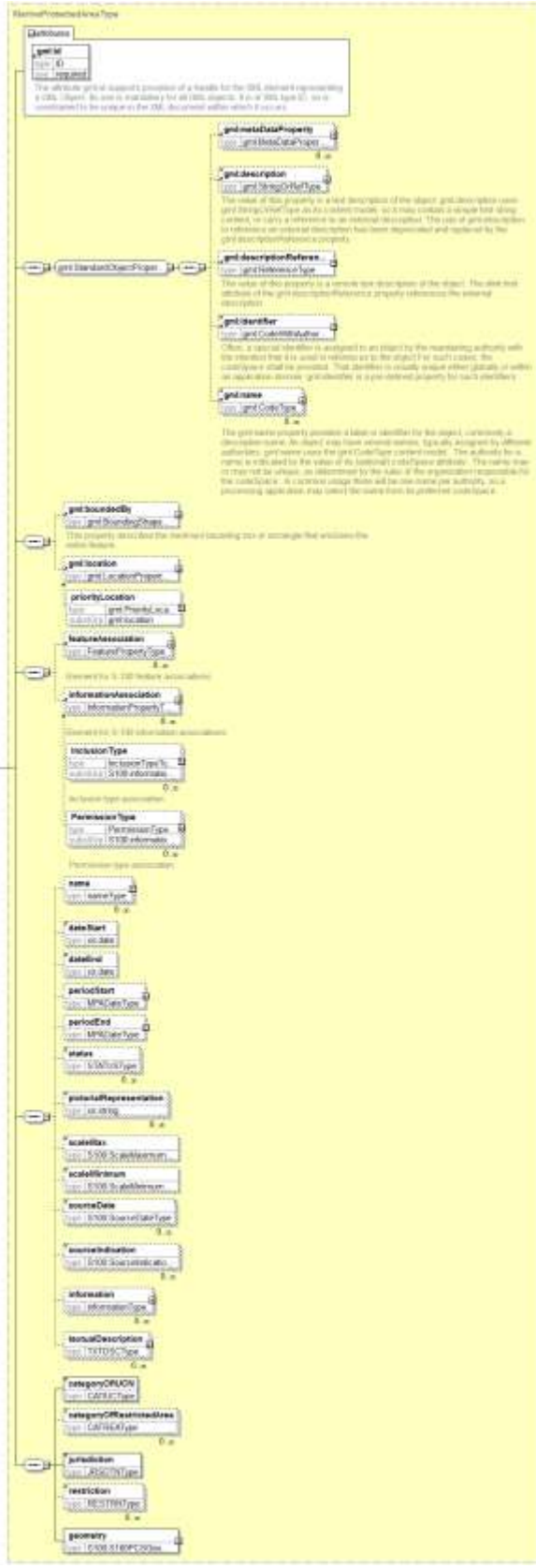
<p>diagram</p>	<p>Inclusion Type type InclusionTypeType substitutionGroup S100:informationAssociation Inclusion type association</p> <p>InclusionTypeType Attributes: - gml:id: type ID, use required. The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. - xlink:type: type xlink:typeType, fixed simple. - xlink:href: type xlink:hrefType. - xlink:role: type xlink:roleType. - xlink:arcrole: type xlink:arcroleType. - xlink:title: type xlink:titleAttrType. - xlink:show: type xlink:showType. - xlink:actuate: type xlink:actuateType. - nilReason: type gml:nilReasonType. - gml:remoteSchema: type anyURI. - gml:metaDataProperty: type gml:MetaDataProperty, 0..1. - gml:description: type gml:StringOrRefType. The value of this property is a text description of the object. gml:description uses gml:StringOrRefType as its content model, so it may contain a simple text string content, or carry a reference to an external description. The use of gml:description to reference an external description has been deprecated and replaced by the gml:descriptionReference property. - gml:descriptionReference: type gml:ReferenceType. The value of this property is a remote text description of the object. The xlink:href attribute of the gml:descriptionReference property references the external description. - gml:identifier: type gml:CodeWithAuthority. Often, a special identifier is assigned to an object by the maintaining authority with the intention that it is used in references to the object. For such cases, the codeSpace shall be provided. That identifier is usually unique either globally or within an application domain. gml:identifier is a pre-defined property for such identifiers. - gml:name: type gml:CodeType, 0..1. The gml:name property provides a label or identifier for the object, commonly a descriptive name. An object may have several names, typically assigned by different authorities. gml:name uses the gml:CodeType content model. The authority for a name is indicated by the value of its (optional) codeSpace attribute. The name may or may not be unique, as determined by the rules of the organization responsible for the codeSpace. In common usage there will be one name per authority, so a processing application may select the name from its preferred codeSpace. - membership: type MBRSHPTYPE.</p>
<p>type</p>	<p>InclusionTypeType</p>
<p>substitution group</p>	<p>S100:informationAssociation</p>
<p>properties</p>	<p>content complex</p>
<p>children</p>	<p>gml:metaDataProperty gml:description gml:descriptionReference gml:identifier</p>

gml:name membership						
attributes	Name	Type	Use	Default	Fixed	Annotation
	gml:id	xs:ID	required			documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
	xlink:type	xlink:typeType			simple	
	xlink:href	xlink:hrefType				
	xlink:role	xlink:roleType				
	xlink:arcrole	xlink:arcroleType				
	xlink:title	xlink:titleAttrType				
	xlink:show	xlink:showType				
	xlink:actuate	xlink:actuateType				
	nilReason	gml:nilReasonType				
	gml:remoteSchema	xs:anyURI				appinfo deprecated
annotation	appinfo?	documentation	Inclusion type association			

element MarineProtectedArea

diagram

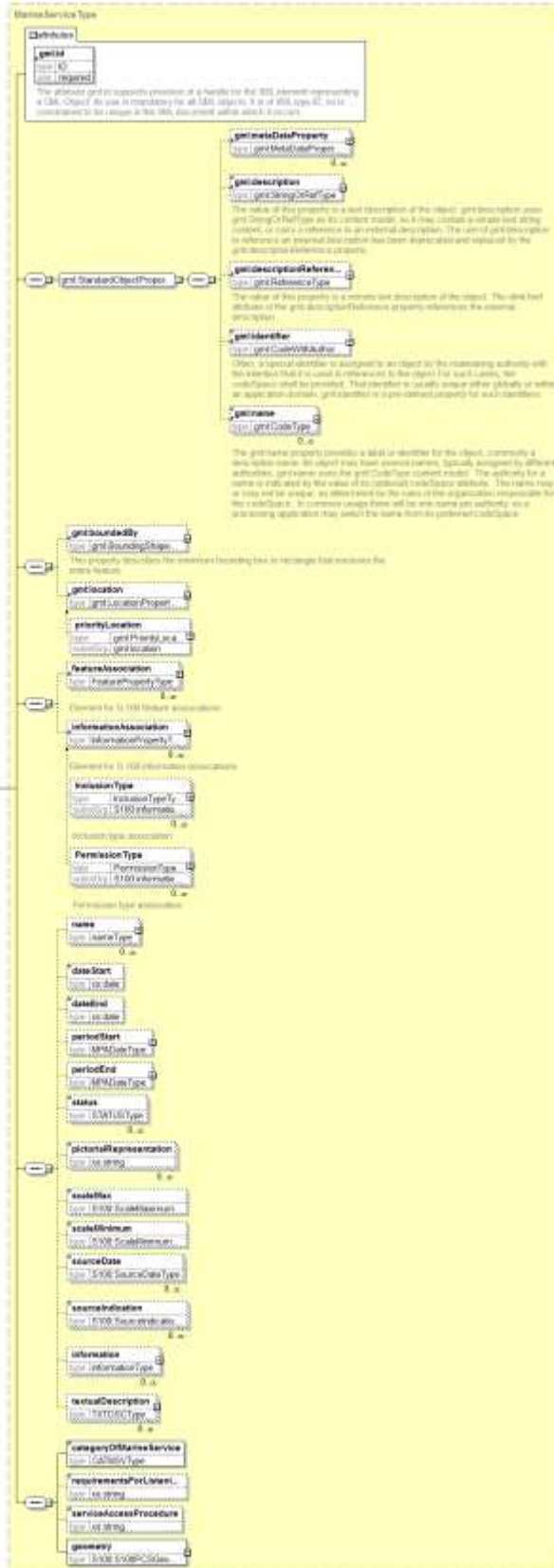
MarineProtectedArea
 gml:MarineProtectedArea
 namespace: "http://www.opengis.net/gml/3.2/MPA" base="gml:AbstractFeatureType" minOccurs="1" maxOccurs="1" use="required" style="border: 1px solid black; padding: 2px;">
 Marine Protected Area. Any area of the seabed or sea floor (space) together with its underlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment. (ISO 19115-2:2004, The Spatial Reference Model, Part 2, Annex C, 3.2.30 of the ISO General Assembly of the OGC, 2004, See related with Cambridge, 18.)



type	MarineProtectedAreaType					
substitution group	S100:AbstractS100Feature					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name gml:boundedBy gml:location featureAssociation informationAssociation name dateStart dateEnd periodStart periodEnd status pictorialRepresentation scaleMax scaleMinimum sourceDate sourceIndication information textualDescription categoryOfIUCN categoryOfRestrictedArea jurisdiction restriction geometry					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Marine Protected Area: Any area of the intertidal or sub tidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment. (IUCN – The World Conservation Union. 1998. Resolution 17.38 of the 17th General Assembly of the IUCN. Gland, Switzerland and Cambridge, UK.)					

element MarineService

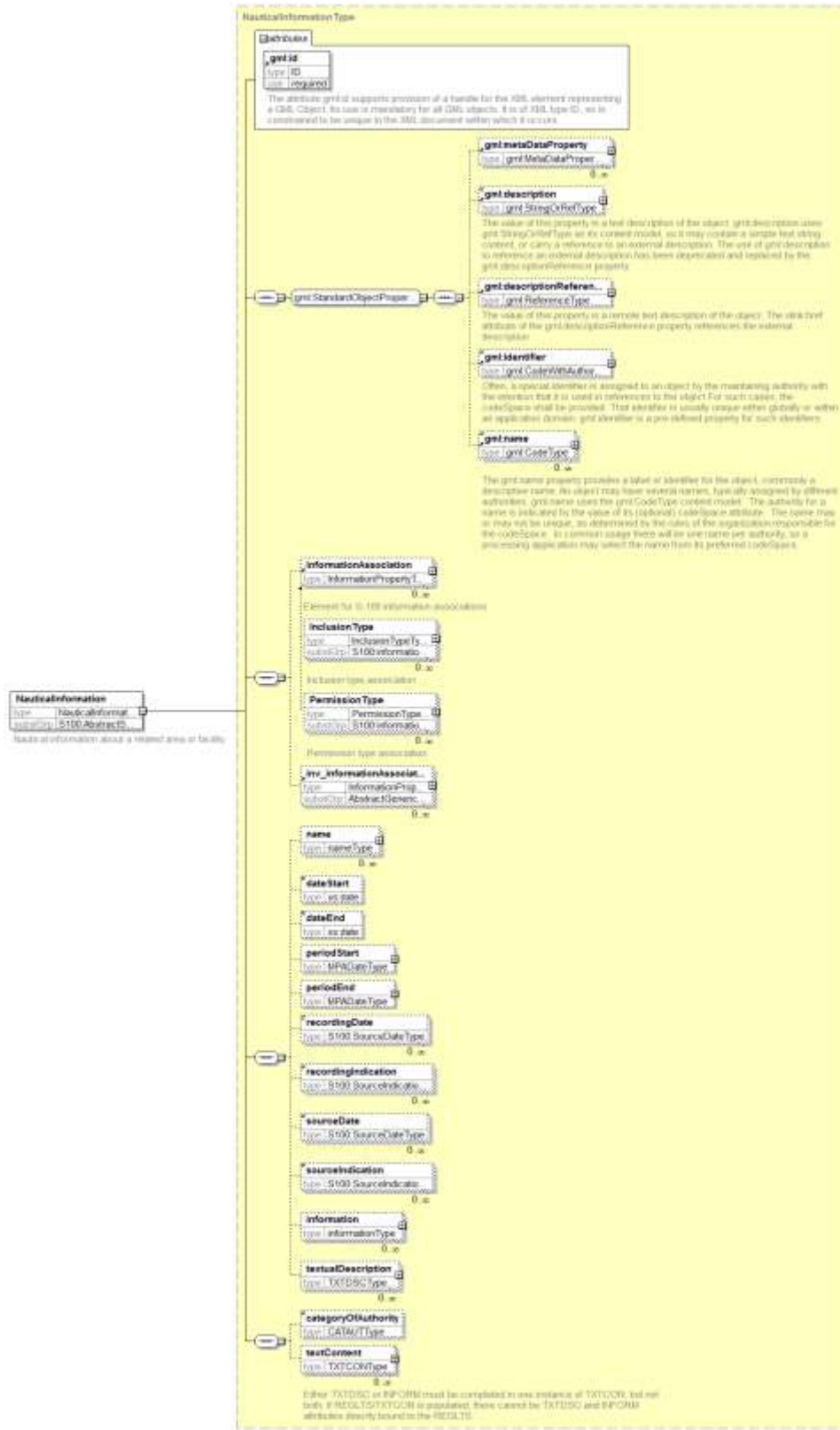
diagram



type	MarineServiceType					
substitution group	S100:AbstractS100Feature					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name gml:boundedBy gml:location featureAssociation informationAssociation name dateStart dateEnd periodStart periodEnd status pictorialRepresentation scaleMax scaleMinimum sourceDate sourceIndication information textualDescription categoryOfMarineService requirementsForListeningWatch serviceAccessProcedure geometry					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation A service implemented by a relevant authority for shipping, e.g. traffic control, information, assistance.					

element NauticalInformation

diagram



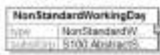
type

NauticalInformationType

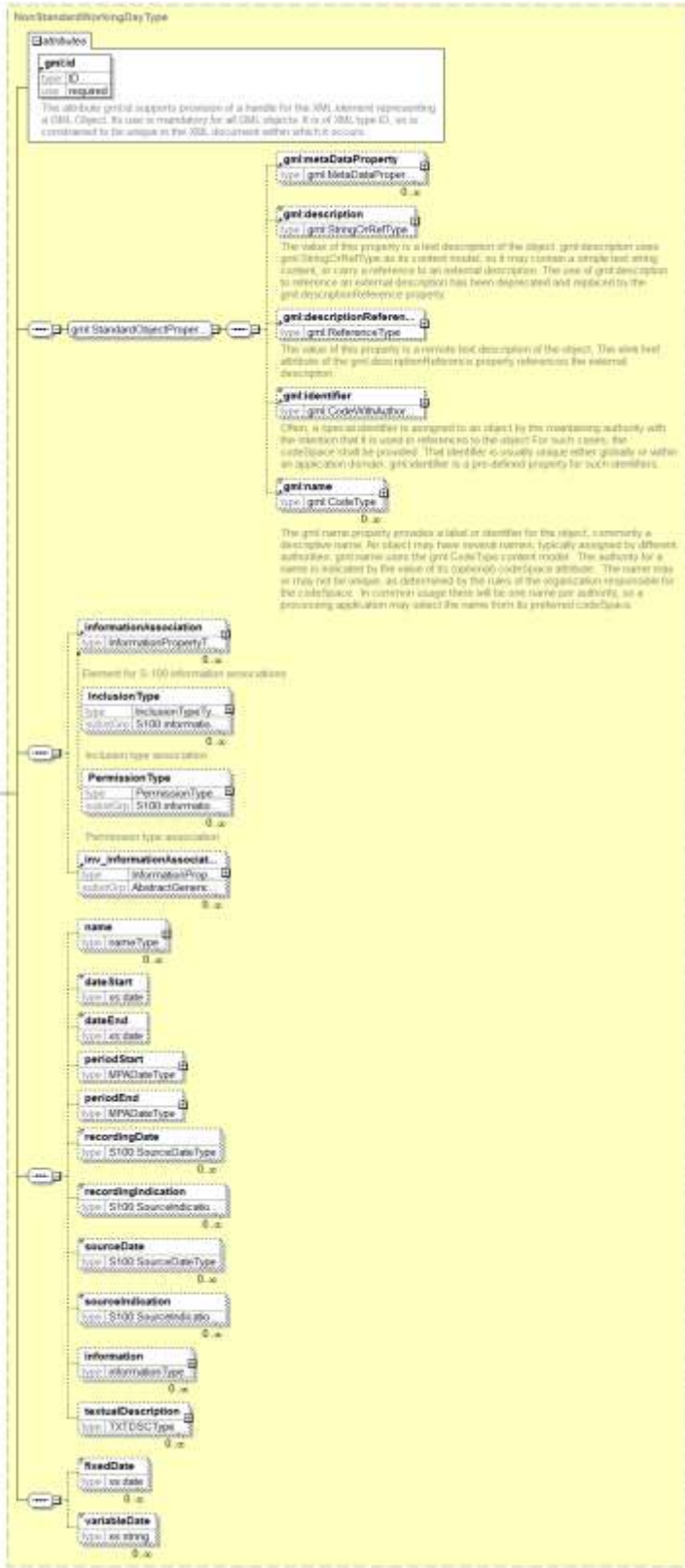
substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfAuthority textContent					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Nautical information about a related area or facility.					

element NonStandardWorkingDay

diagram



Days when many services are not available. Other days of flexibility or recreation when normal working hours are broken, e.g. a national or religious festival, etc.



type

NonStandardWorkingDayType

substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription fixedDate variableDate					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Days when many services are not available. Often days of festivity or recreation when normal working hours are limited, esp. a national or religious festival, etc.					

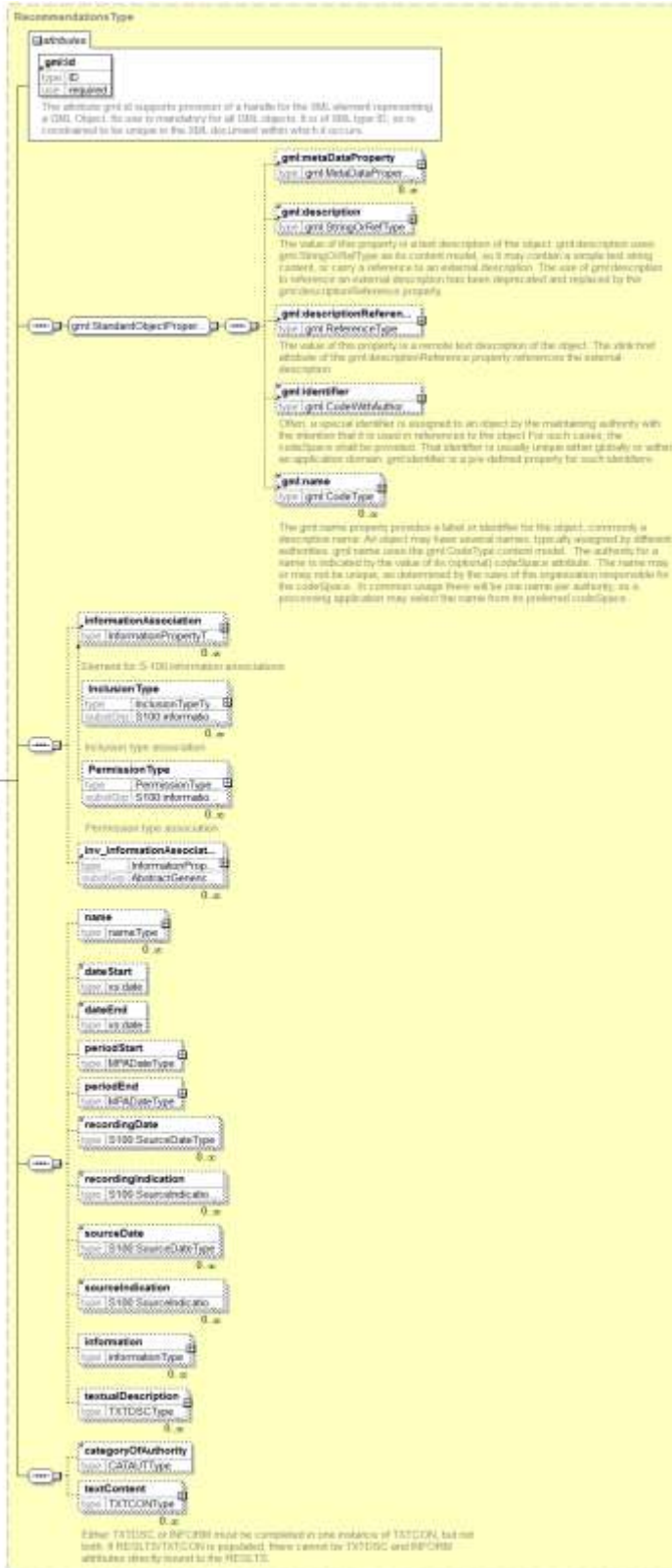
element **PermissionType**

<p>diagram</p>	<p>PermissionType type: PermissionType substitutionGroup: S100:informationAssociation Permission type association</p> <p>PermissionTypeType</p> <p>Attributes</p> <ul style="list-style-type: none"> gml:id type: ID use: required The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs. xlink:type type: xlink:typeType fixed: simple xlink:href type: xlink:hrefType xlink:role type: xlink:roleType xlink:arcrole type: xlink:arcroleType xlink:title type: xlink:titleAttrType xlink:show type: xlink:showType xlink:actuate type: xlink:actuateType nilReason type: gml:nilReasonType gml:remoteSchema type: anyURI <p>gml:metaDataProperty type: gml:MetaDataProperty 0..*</p> <p>gml:description type: gml:StringOrRefType The value of this property is a text description of the object. gml:description uses gml:StringOrRefType as its content model, so it may contain a simple text string content, or carry a reference to an external description. The use of gml:description to reference an external description has been deprecated and replaced by the gml:descriptionReference property.</p> <p>gml:descriptionReference type: gml:ReferenceType The value of this property is a remote text description of the object. The xlink:href attribute of the gml:descriptionReference property references the external description.</p> <p>gml:identifier type: gml:CodeWithAuthority Often, a special identifier is assigned to an object by the maintaining authority with the intention that it is used in references to the object. For such cases, the codeSpace shall be provided. That identifier is usually unique either globally or within an application domain. gml:identifier is a pre-defined property for such identifiers.</p> <p>gml:name type: gml:CodeType 0..*</p> <p>The gml:name property provides a label or identifier for the object, commonly a descriptive name. An object may have several names, typically assigned by different authorities. gml:name uses the gml:CodeType content model. The authority for a name is indicated by the value of its (optional) codeSpace attribute. The name may or may not be unique, as determined by the rules of the organization responsible for the codeSpace. In common usage there will be one name per authority, so a processing application may select the name from its preferred codeSpace.</p> <p>categoryOfRelationship type: CATRELType</p>
<p>type</p>	<p>PermissionTypeType</p>
<p>substitution group</p>	<p>S100:informationAssociation</p>
<p>properties</p>	<p>content complex</p>
<p>children</p>	<p>gml:metaDataProperty gml:description gml:descriptionReference gml:identifier</p>

gml:name categoryOfRelationship						
attributes	Name	Type	Use	Default	Fixed	Annotation
	gml:id	xs:ID	required	t		documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
	xlink:type	xlink:typeType			simple	
	xlink:href	xlink:hrefType				
	xlink:role	xlink:roleType				
	xlink:arcrole	xlink:arcroleType				
	xlink:title	xlink:titleAttrType				
	xlink:show	xlink:showType				
	xlink:actuate	xlink:actuateType				
	nilReason	gml:nilReasonType				
	gml:remoteSchema	xs:anyURI				appinfo deprecated
annotation	appinfo?	documentation	Permission type association			

element Recommendations

diagram



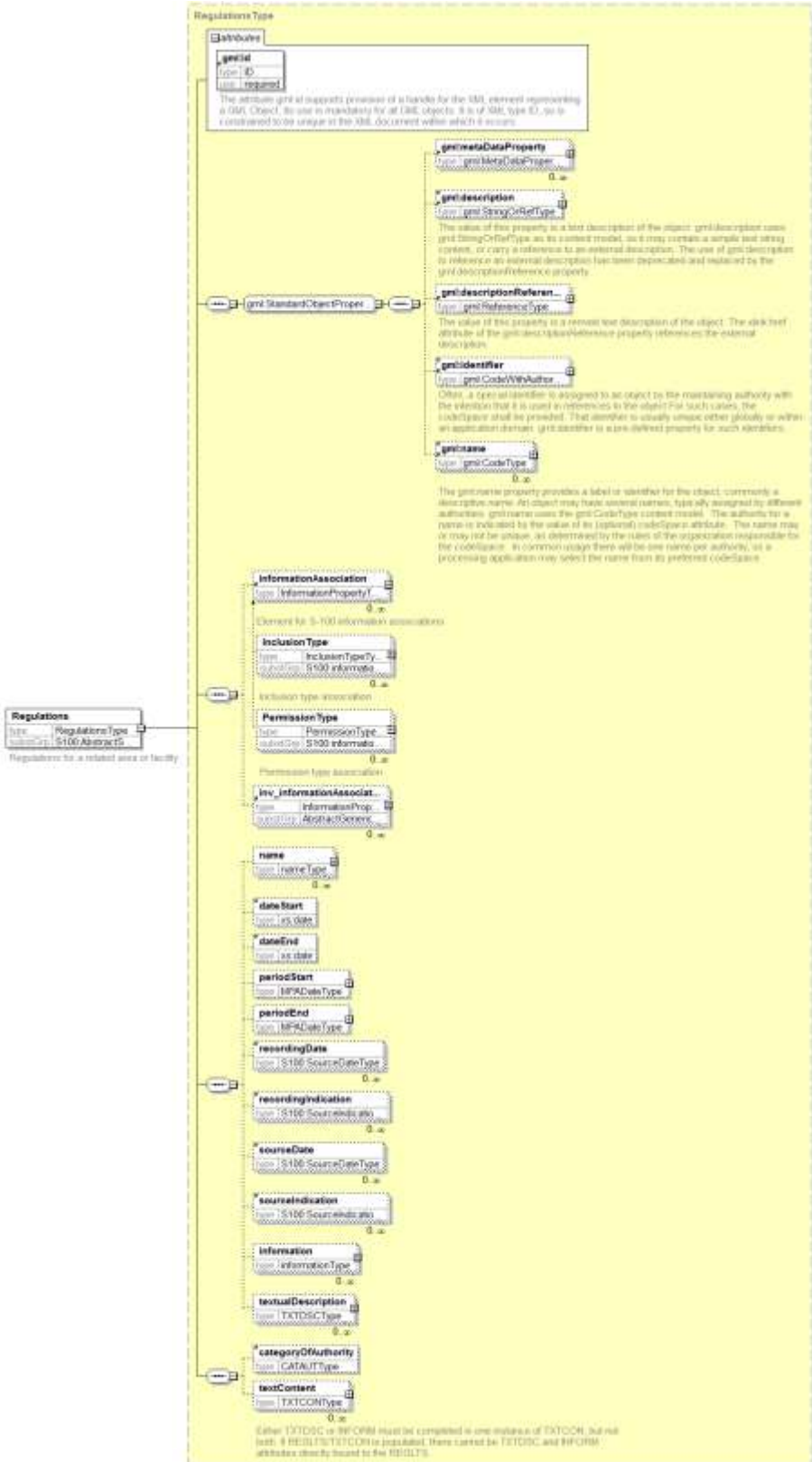
type

RecommendationsType

substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfAuthority textContent					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Recommendations for a related area or facility.					

element Regulations

diagram

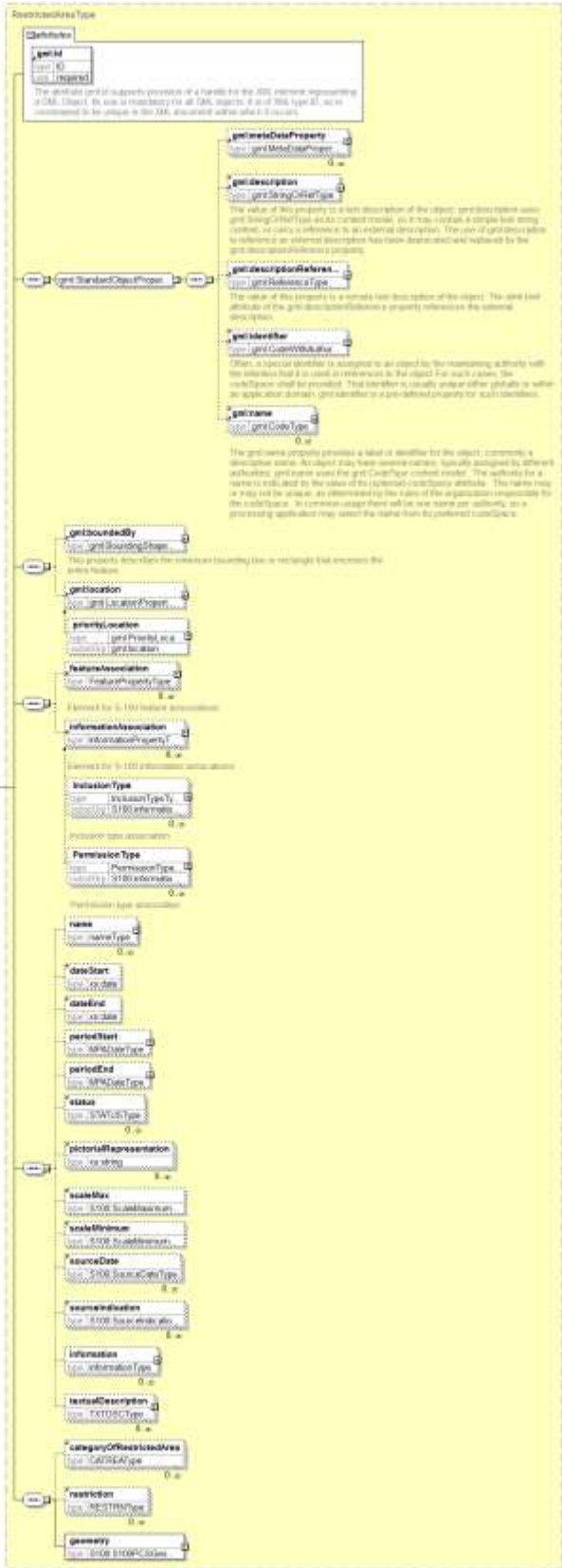


type	RegulationsType					
substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfAuthority textContent					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Regulations for a related area or facility					

element RestrictedArea

diagram

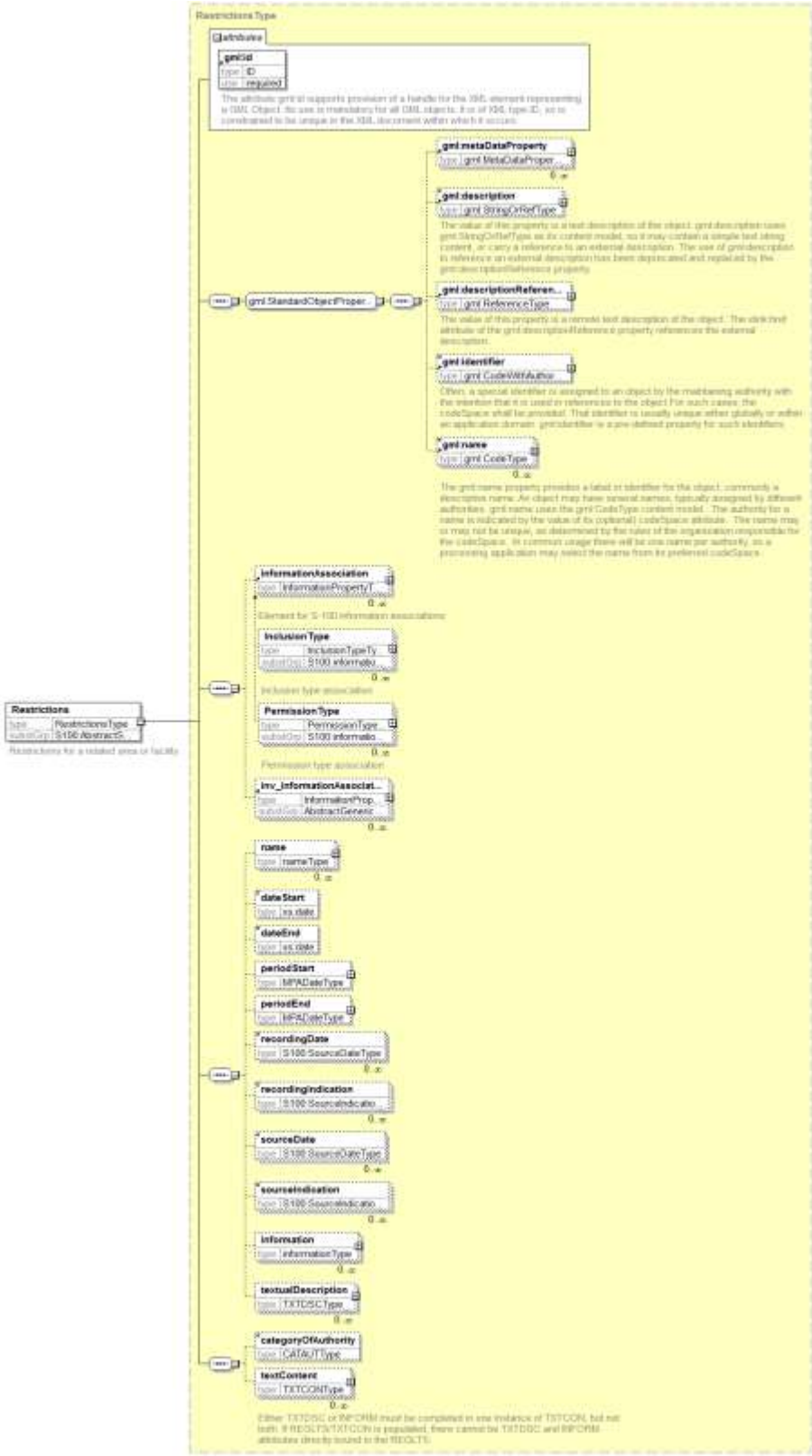
RestrictedArea
 type: RestrictedArea
 specified area demarcated by an applicable authority within which a navigation is restricted in accordance with certain specified conditions



type	RestrictedAreaType						
substitution group	S100:AbstractS100Feature						
properties	content complex						
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name gml:boundedBy gml:location featureAssociation informationAssociation name dateStart dateEnd periodStart periodEnd status pictorialRepresentation scaleMax scaleMinimum sourceDate sourceIndication information textualDescription categoryOfRestrictedArea restriction geometry						
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.	
annotation	appinfo ? documentation specified area designated by an appropriate authority within which navigation is restricted in accordance with certain specified conditions.						

element Restrictions

diagram



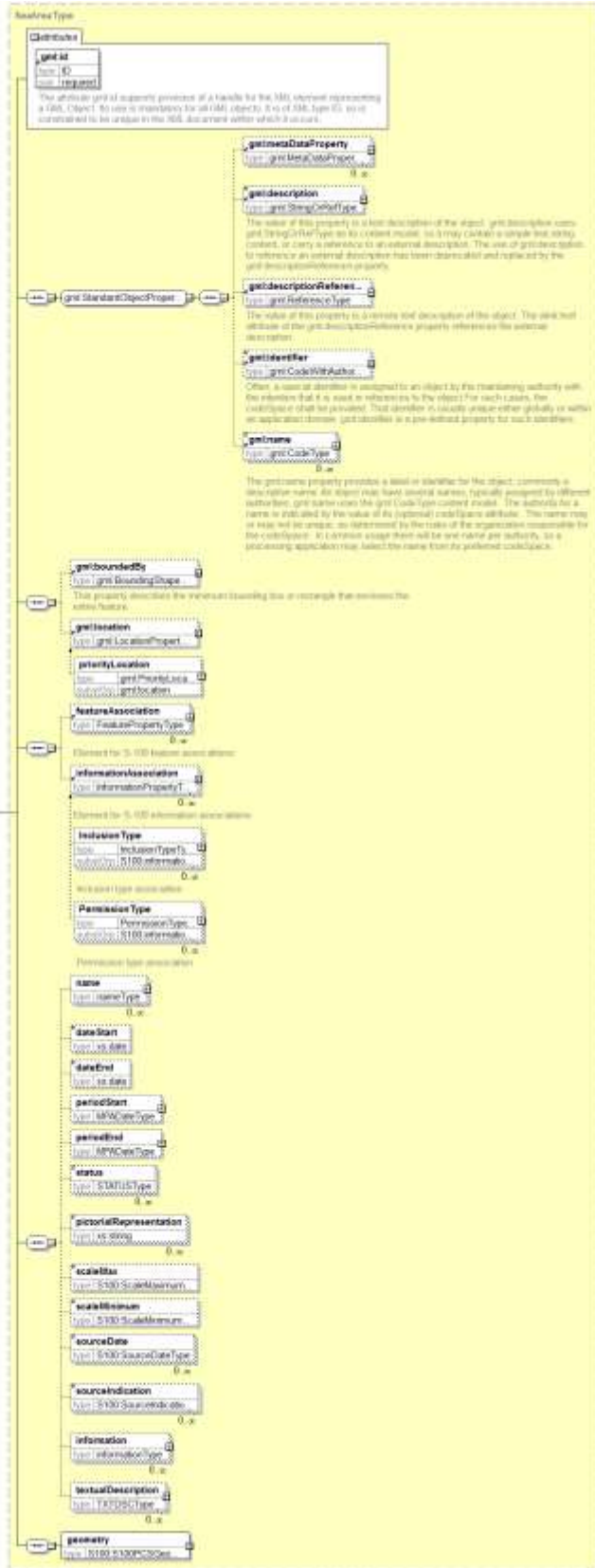
type **RestrictionsType**

substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfAuthority textContent					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation Restrictions for a related area or facility.					

element SeaArea

diagram

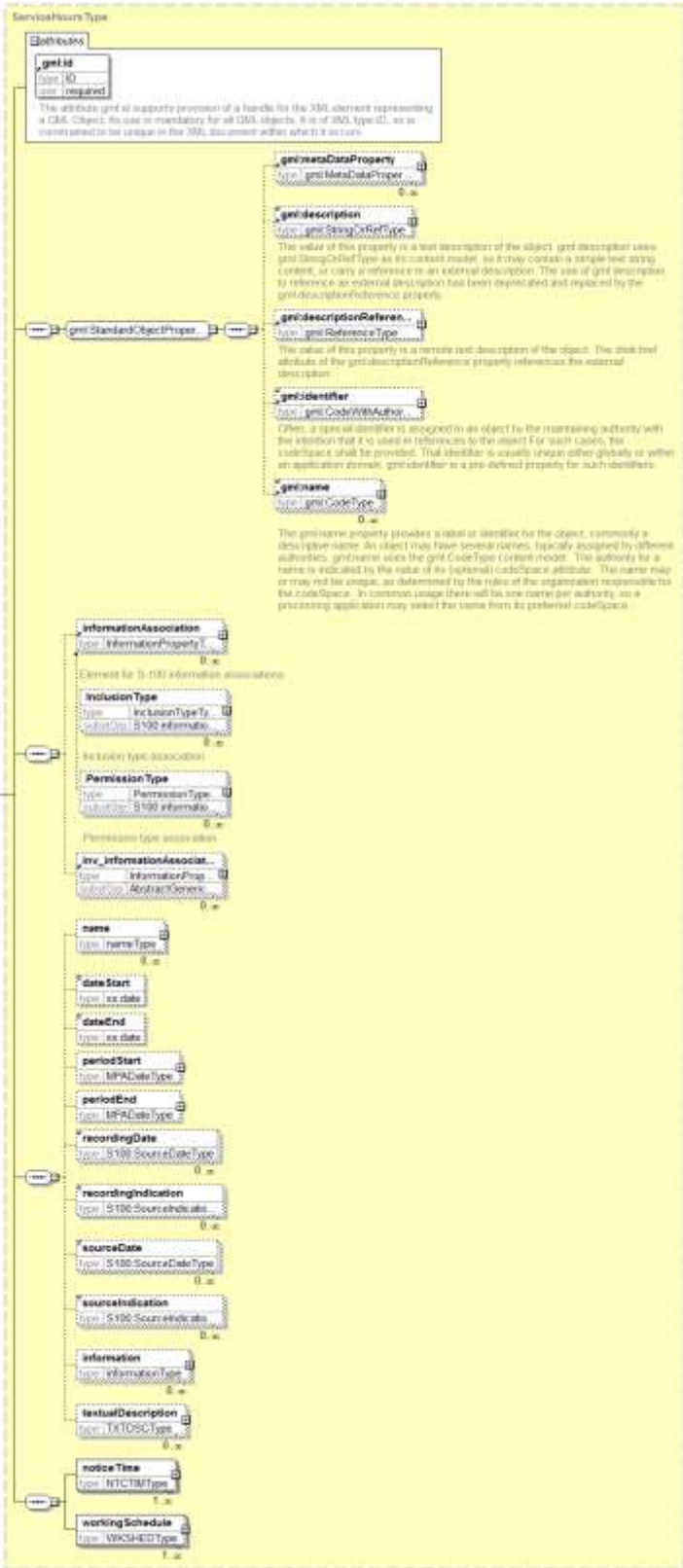
SeaArea
 Type: SeaAreaType
 Abstract: true
 A group of one or more parts of the sea or other aquatic waters. It may be specified within its limits by the proper name.



type	SeaAreaType					
substitution group	S100:AbstractS100Feature					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name gml:boundedBy gml:location featureAssociation informationAssociation name dateStart dateEnd periodStart periodEnd status pictorialRepresentation scaleMax scaleMinimum sourceDate sourceIndication information textualDescription geometry					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation A geographically defined part of the sea or other navigable waters. It may be specified within its limits by its proper name.					

element ServiceHours

diagram

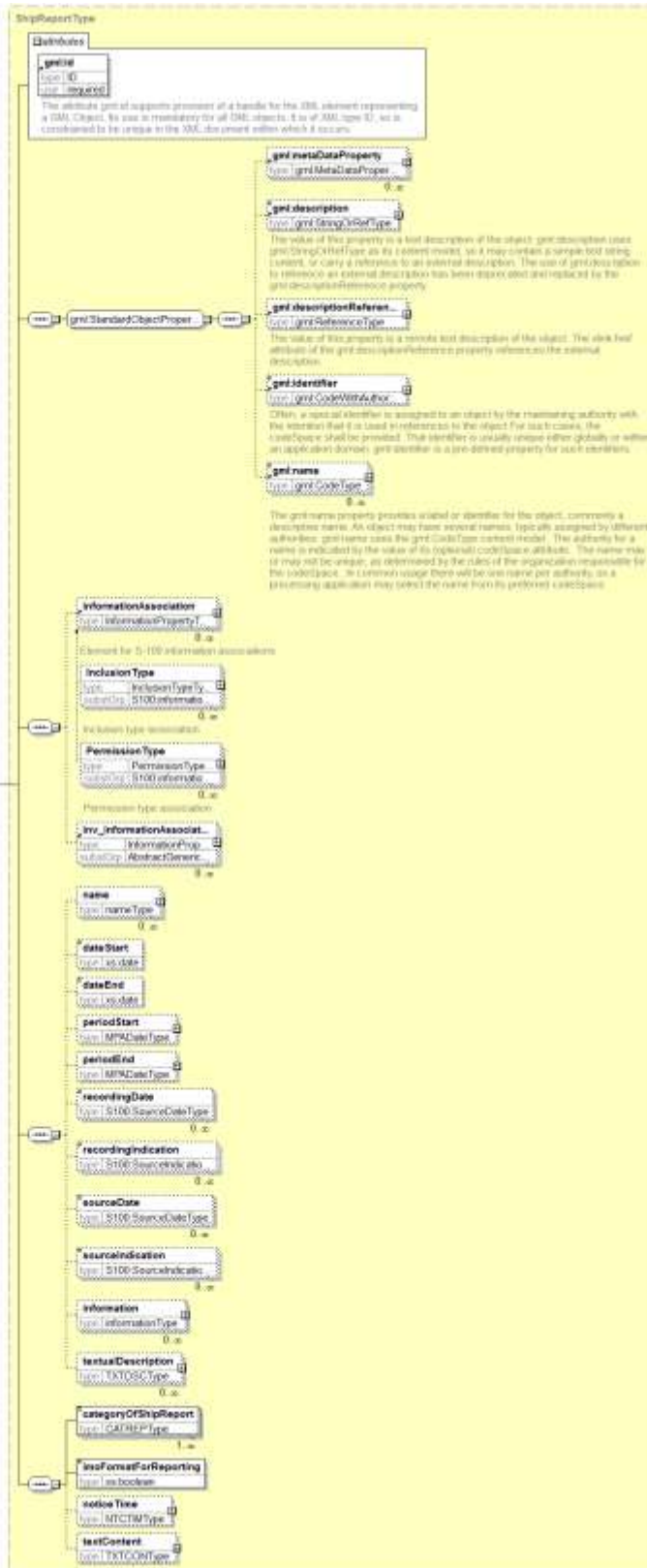


type **ServiceHoursType**

substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription noticeTime workingSchedule					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation The time when a service is available and known exceptions.					

element ShipReport

diagram



type	ShipReportType					
substitution group	S100:AbstractS100InformationObject					
properties	content complex					
children	gml:metaDataProperty gml:description gml:descriptionReference gml:identifier gml:name informationAssociation inv_informationAssociation name dateStart dateEnd periodStart periodEnd recordingDate recordingIndication sourceDate sourceIndication information textualDescription categoryOfShipReport imoFormatForReporting noticeTime textContent					
attributes	Name gml:id	Type xs:ID	Use required	Default	Fixed	Annotation documentation The attribute gml:id supports provision of a handle for the XML element representing a GML Object. Its use is mandatory for all GML objects. It is of XML type ID, so is constrained to be unique in the XML document within which it occurs.
annotation	appinfo ? documentation his describes how a ship should report to a maritime authority, including when to report, what to report and whether the format conforms to the IMO standard.					