



SKILLTRADE

Skilltrade

From Introduction Hydrography to
Certified courses

Our services



- Hydrographic training and courses since 2000
- Developed by people who gained their experience in the field and taught by those same individuals
- Skilltrade provides courses and training in three areas:
 - Introductory and general courses
 - E-learning modules
 - Hydrographic Survey Category B programme

Our organisation



- Huibert Jan Lekkerkerk, B.Sc. Hydrography / Cat. A (1995), B.Ee Maritime Electronics (1997), M.Sc. Geographical Information Management and Applications (2012)
- Guus Verhagen, BSc Maritime Science (2004), MICS, Pedagogic didactics (2002)
- Jan Appelman, Hydrography, Cat. A (1986), Navigation officer / Charge surveyor
- Axel de Meijer, Cat. B, owner G2 survey company
- Christa Ravensbergen, management assistant
- Johan Stam, managing director
- Pool of 16 skilled and experienced lecturers

IHO accredited Category B course



- Skilltrade Category B programme has been officially recognised as such on the 1st July 2008
- In 2016 our programme received continued recognition as a FIG/IHO/ICA Class B Hydrographic Survey Programme in accordance with the Standards of Competence for Hydrographic Surveyors FIG/IHO/ICA S-5, Edition 11.1.0

IHO accredited Category B course



- Intense course of now 30 weeks, a 12 week course in The Netherlands, preceded by a 13 weeks e-learning program and 1 week safety course.

Block	I	II-0	II-1	II-2	II-3	III	IV
Week	1 – 13	14	15 - 18	19 – 25	26	27 - 30	30 – max. 185
Modules	E-Learning	Safety induction	Basic modules	Essential and Optional modules	Educational Survey Project (ESP)	Field Training Project (FTP)	Field Proficiency Period (FPP)
Outcome	Eligible to enter Cat.B Course	BOSIET + OLF-supplement Universal Basic Survival	<ul style="list-style-type: none"> • QINSy Online Cert. • Skilltrade Cert. of Attendance, or Skilltrade Cert. of Education 			FIG/IHO/ICA Cert. of Course Completion	FIG/IHO/ICA Cert. of Field Proficiency



E-Learning Courses

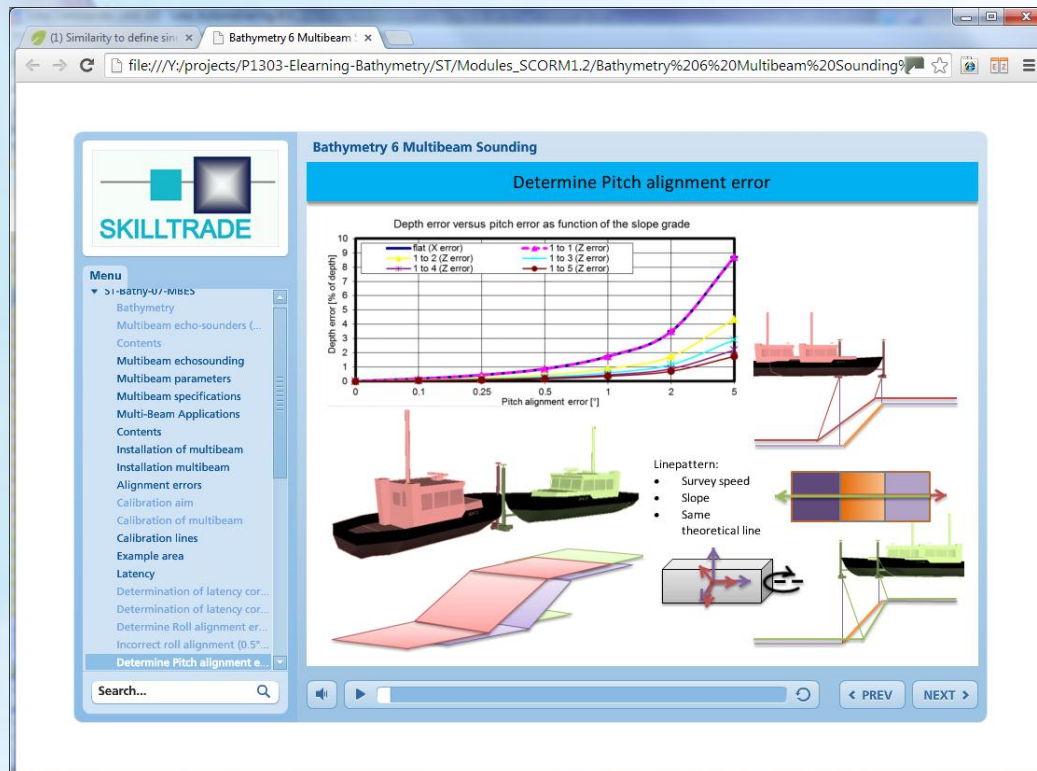
Since 2014 we offer the following E-Learning courses:

- Mathematics
- Physics
- [Bathymetry](#)
- [Geodesy](#)
- [Global Navigation Satellite Systems](#)

E-Learning Courses


With the app Moodle Mobile the content of these courses is available, even when offline.

Contact us for a free two week trial




The screenshot displays the 'Bathymetry 6 Multibeam Sounding' course interface. The top navigation bar is blue with the title 'Bathymetry 6 Multibeam Sounding' and a sub-header 'Determine Pitch alignment error'. The left sidebar contains a 'Menu' with a tree view of course topics, including 'Bathymetry', 'Multibeam echo-sounders', 'Contents', 'Multibeam echosounding', 'Multibeam parameters', 'Multibeam specifications', 'Multi-Beam Applications', 'Contents', 'Installation of multibeam', 'Installation multibeam', 'Alignment errors', 'Calibration aim', 'Calibration of multibeam', 'Calibration lines', 'Example area', 'Latency', 'Determination of latency cor...', 'Determination of latency cor...', 'Determine Roll alignment er...', 'Incorrect roll alignment (0.5°)', and 'Determine Pitch alignment e...'. The main content area features a graph titled 'Depth error versus pitch error as function of the slope grade'. The graph plots 'Depth error [% of depth]' on the y-axis (0 to 10) against 'Pitch alignment error [°]' on the x-axis (0 to 5). It shows several curves representing different error levels: 'Flat (X error)', '1 to 2 (Z error)', '1 to 3 (Z error)', '1 to 4 (Z error)', and '1 to 5 (Z error)'. Below the graph are three diagrams: a 3D model of a ship, a 2D cross-section of a ship's hull, and a 3D model of a ship's hull with a pitch error. A 'Linepattern:' section lists 'Survey speed', 'Slope', and 'Same theoretical line'. The bottom of the interface includes a search bar, a progress bar, and navigation buttons for 'PREV' and 'NEXT'.

Course schedule



A program which provides a practical comprehension of hydrographic surveying for individuals with the skill to carry out the various hydrographic surveying tasks



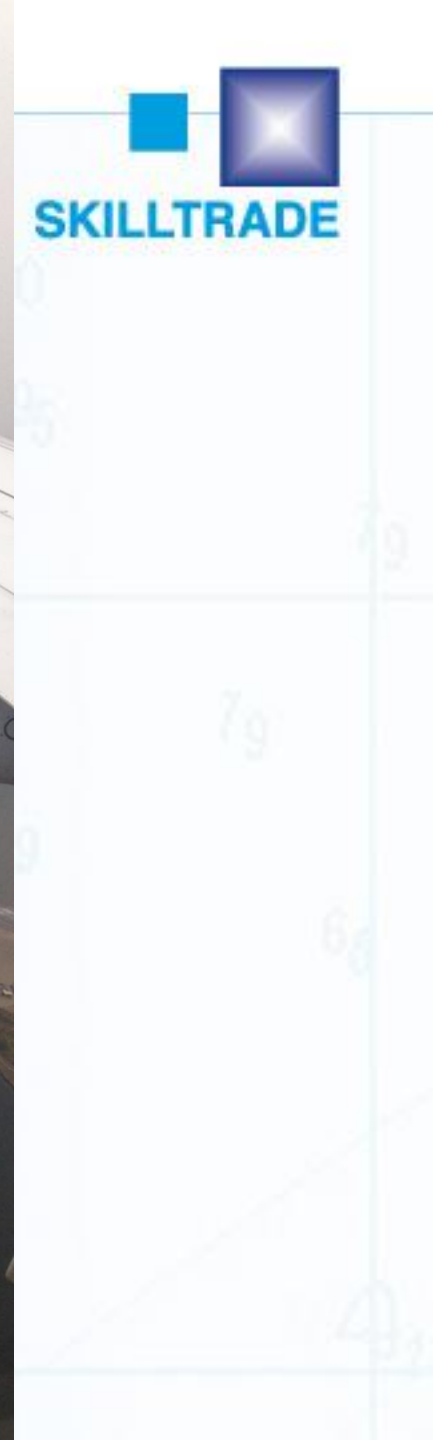
13 weeks e-learning

	course wk01								course wk02								course wk03						
	4-sep-17	Tue	Wed	Thu	Fri	Sat	Sun		11-sep-17	Tue	Wed	Thu	Fri	Sat	Sun		18-sep-17	Tue	Wed	Thu	Fri	Sat	Sun
Morning	B1 Mathematics	B4 Nautical Skills	E 4 Types of Hydrographic Surveys	Nautical Skills	practical exercise (tides, level & positioning)	Social program		Nautical Skills	Mathematics	Mathematics	B3 Physics	Exam B1 Maths				Physics	Physics	Nautical	Exam B3 (part 1) Physics				
Afternoon	Mathematics	Mathematics	B1 Theory of Errors	Mathematics				Nautical Skills	Mathematics	workshop Port of Rotterdam	Physics	B4 Meele				Physics	Workshop Hydrographic Service	Nautical	Q2 workshop STEMA	B4 Meele			
after 16:00								B4 practical / splicing															
	course wk04								course wk05								course wk06						
	25-sep-17	Tue	Wed	Thu	Fri	Sat	Sun		2-okt-17	Tue	Wed	Thu	Fri	Sat	Sun		9-okt-17	Tue	Wed	Thu	Fri	Sat	Sun
Morning	Exam B4 Nautical Science	Physics II	Physics II	Exam B3 (part 2) Physics	B2 ICT - databases & GIS ESRI			E1 Underwater acoustics & Singlebeam	E1 Underwater acoustics & Singlebeam	E7 Law of the sea	E2 Waves, Streams and Currents	E3 Geodesy				E2 Tides	E2 Tides	E5 Online Survey Software	E2 Processing of Tidal Influences	E1 Side Scan Sonar	E3 Mot + Geodesy		
Afternoon	Physics II	Physics II	Physics II	E3 Workshop IdBlue				E5 Online Survey Software															
after 16:00																		NOVA	school holiday		1st Course evaluation		
	course wk07								course wk08								course wk09						
	16-okt-17	Tue	Wed	Thu	Fri	Sat	Sun		23-okt-17	Tue	Wed	Thu	Fri	Sat	Sun		30-okt-17	Tue	Wed	Thu	Fri	Sat	Sun
Morning	E3 Horizontal Positioning (LMK theory and calculations)		E3 Acoustic Positioning (Sonardyne Guest speaker)	Exam E2 & E7	E1 Multibeam Echo - sounder			E3 Practical Horizontal Control	E3 Horizontal Control - calculations	E6 Environmental Science	Exam E1	E3 Horizontal Positioning GPS				E6 Earth Science	E5 Online Survey software	Exam E6	Hydrographic Specification and Project preparation	E3 Horizontal Positioning GPS practical			
Afternoon				E4 Workshop Teledyne Reson				E5 Online Survey Software				E6 Workshop Peripus											
after 16:00									Practical exam														
	course wk10								course wk11								course wk12						
	6-nov-17	Tue	Wed	Thu	Fri	Sat	Sun		13-nov-17	Tue	Wed	Thu	Fri	Sat	Sun		20-nov-17	Tue	Wed	Thu	Fri	Sat	Sun
Morning	Workshop Ocean Wave	E5 Online Survey software	Exam E3	E4 Practical - soldering & fault finding & data telemetry	Q2 Coastal Zone			O 4Rigs, Platforms, Drilling Technology	Exam E4	E4 Pipeline and Cable Operations & ROV		Education Survey Project, FRK, HUL & AdM Group1				E4 Full day GPS workshop + workshop group 1, 2 & 3	RWS	Education Survey Project	Software - Exam E5 (GPS)	Logbooks & 2nd Course Evaluation			
Afternoon			B2 ICT - Networking					E4 VanDord workshop				E4 Full day GPS workshop + workshop group 2, 3 & 4	RWS			Education Survey Project, FRK, HUL & AdM Group 2							
after 16:00																							
	wk13 - Module 4								wk14 - Module 4								wk15 - Module 4						
	27-nov-17	Tue	Wed	Thu	Fri	Sat	Sun		4-dec-17	Tue	Wed	Thu	Fri	Sat	Sun		11-dec-17	Tue	Wed	Thu	Fri	Sat	Sun
	SAIO safety training (Between 21st and 25th September 2017)																						

Reedijk, Goedhart, v Slijp, Schiphorst, Brouwer (Nova College)										Exams:										Date:										Workshops										Date:																			
Rob van Ree										Basic-1										15-sep-17										Mathematics										Port of Rotterdam										13-sep-17									
Huibert-Jan Lekkerkerk										Basic-2 (part of E5)										24-nov-17										ICT										Royal Dutch Navy										19-sep-17									
Johan Stam or Guus Verhagen										Basic-3 (part 1)										21-sep-17										Physics 1										Stema										21-sep-17									
Piet de Jong										Basic-3 (part 2)										28-sep-17										Physics 2										workshop melleo										22-sep-17									
Fred Knijf										Basic-4										25-sep-17										Mnautical Science										IdBlue										28-sep-17									
Herman Hultema										Essential-1										26-okt-17										Bathymetry										workshop ESRI										29-sep-17									
Peter v Os / Rinus Koelman										Essential-2										19-okt-17										Water levels, flows and tides										Teledyne Reson										19-okt-17									
Axel de Meijer, Robert van Lij, Seger vd Brenk										Essential-3										8-nov-17										Positioning										Peripus										26-okt-17									
Cees Laban & Jan van Dalfsen										Essential-4										14-nov-17										Hydrographic Practice										VanOord & Boskalis										1-nov-17									
Evelien van der Velde (GPS)										Essential-5										24-nov-17										Hydrographic data (GPS)										Oceanwise										6-nov-17									
Ed Esser & Johan van Schaak										Essential-6										1-nov-17										Environmental Science										VanOord workshop										14-nov-17									
George Spoelstra (ESRI)										Essential-7										19-okt-17										Legal Aspects										RWS Northsea										17-nov-17									
guest lecturer Sonardyne																																								Caris + Dredging museum										21-nov-17									
Esther Grootjans (Gaz de France)																																								Survey Project										16-nov-17									
																																																		17-nov-17									
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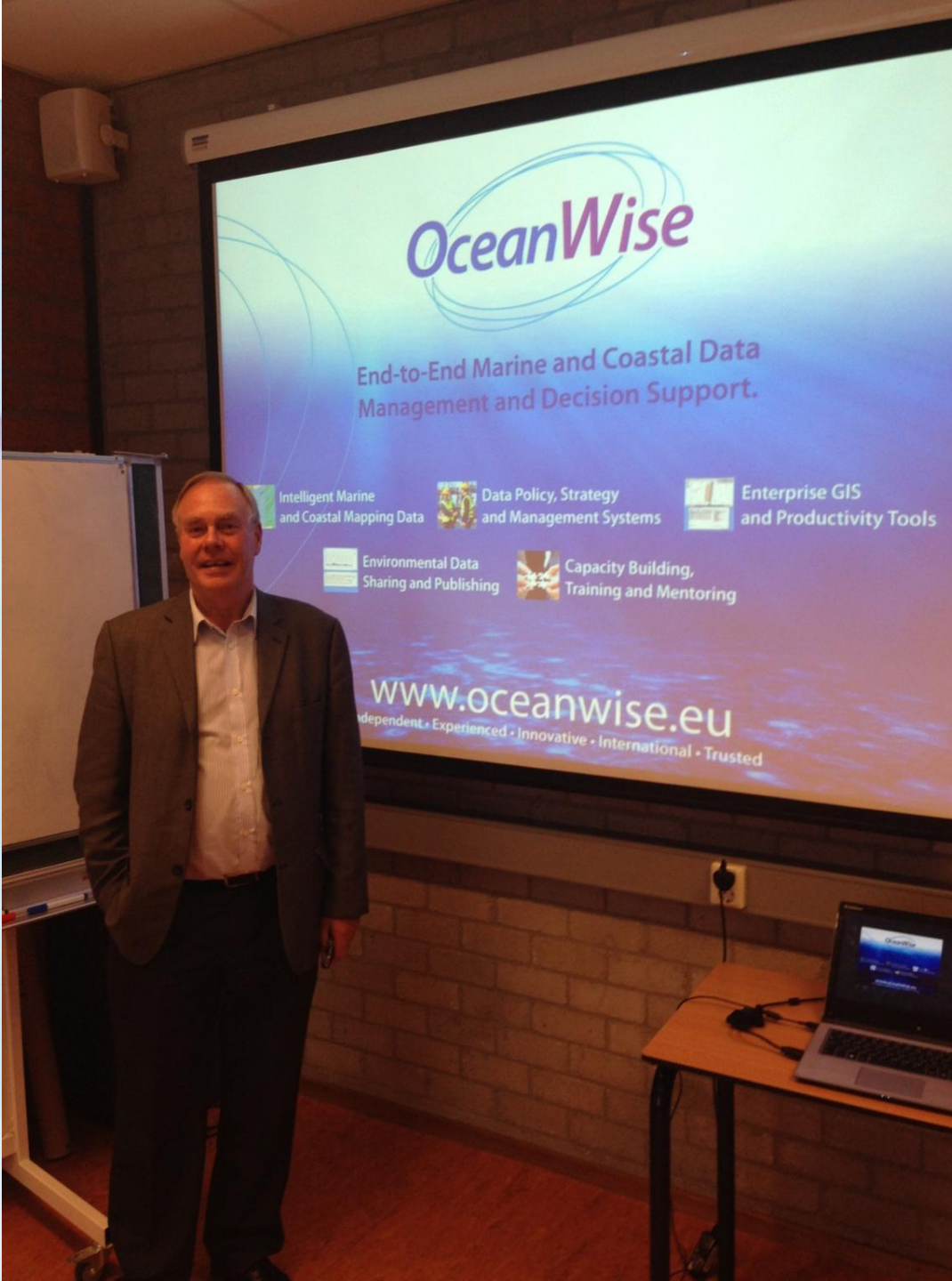






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02 08 04 WK

12 weeks theoretical training

- The inclusion of e-learning created option to add new technology to the Basic modules
 - GIS (in cooperation with ESRI and Ocean Wise)
 - Fault finding (Kongsberg and ITC)
- QPS training including certificate (online - and processing)
- The course includes a concise Educational Survey Project

Field Training Project



- After completion of the 13-week theoretical course in IJmuiden, the student then needs to gain at least 4 weeks experience in a fully supervised Field Training Project in a qualified survey organisation
- Qualified Assessor and Skilltrade Verifier
- FTP-Task book
- FTP reflects the level of knowledge outlined in the Skilltrade-Nova College Category B syllabus
- After successful completion of this project the student is awarded the FIG/IHO/ICA Certificate of Programme completion.

Field Proficiency Period



- After successful completion of the FTP, the candidate may join a max. 3-year Field Experience phase to consolidate hydrographic knowledge and to obtain the necessary practical experience as a hydrographic surveyor.
- Field Experience should accumulate to a total of 365 operational days, that are logged in a Task book.
- After successful completion of Field Experience the student is awarded the FIG/IHO/ICA Certificate of Field Proficiency.
- Equals IMCA grade Senior Surveyor

Certificates



After successful completion of 12 week theoretical training in The Netherlands

QINSy Online Certificate

Skilltrade Certificate of Education

After completion of Field Training Project

FIG/IHO/ICA Cert. of Course Completion

After completion of Field Proficiency Period

FIG/IHO/ICA Cert. of Field Proficiency

Results

Up to and including January 2017 (19 th Class)		
Number of students	169	
Failed and/or stopped	19	11,2%
Skilltrade Cert. of Education	150	88,8%
FIG/IHO/ICA Cert. of Course Completion	132	78,1%
FIG/IHO/ICA Cert. of Field Proficiency	60	35,5%

Cooperation with local university



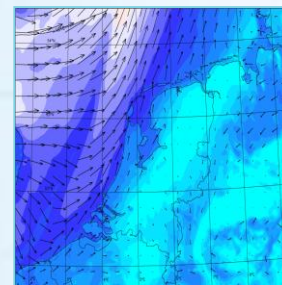
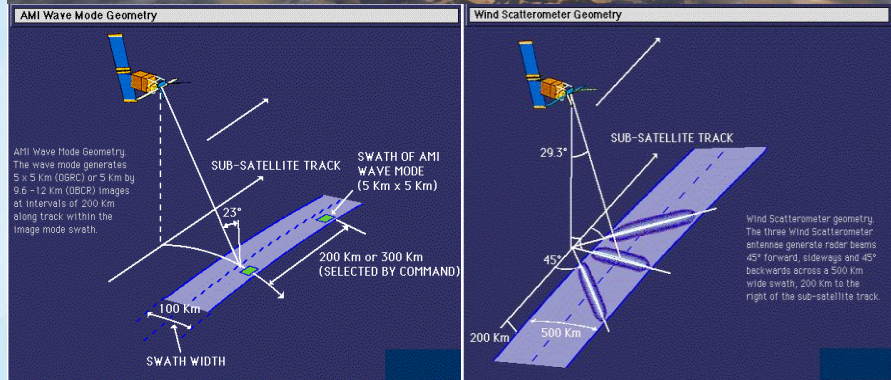
- We aim to start a cooperation like we have with CPUT in Cape Town.
- Local university will teach “Basic” training with support of a local coordinator
- The 8 week essential training to be followed in The Netherlands
- In contact with Malaysia / Scandinavia
- We are open for discussion / cooperation



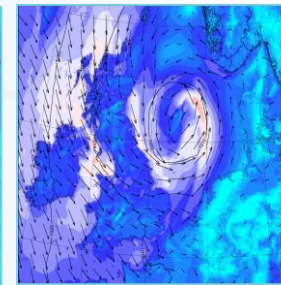
Future developments

- Cooperation with Ocean Space Consult and HERMESS: Satellite Data collection of tides and coast lines supported by ESA and NSO (to support with basic training)
- Wind, wave, sea level en currents historical database (25 years) and forecast. (New methods using satellite observations)
- Process of satellite data to map shallow coastal waters.

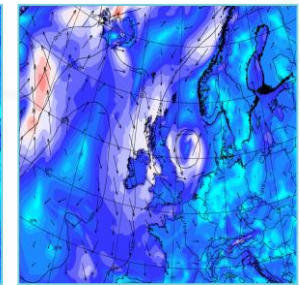
Weather, wind, wave, current and water level data from models + measurements



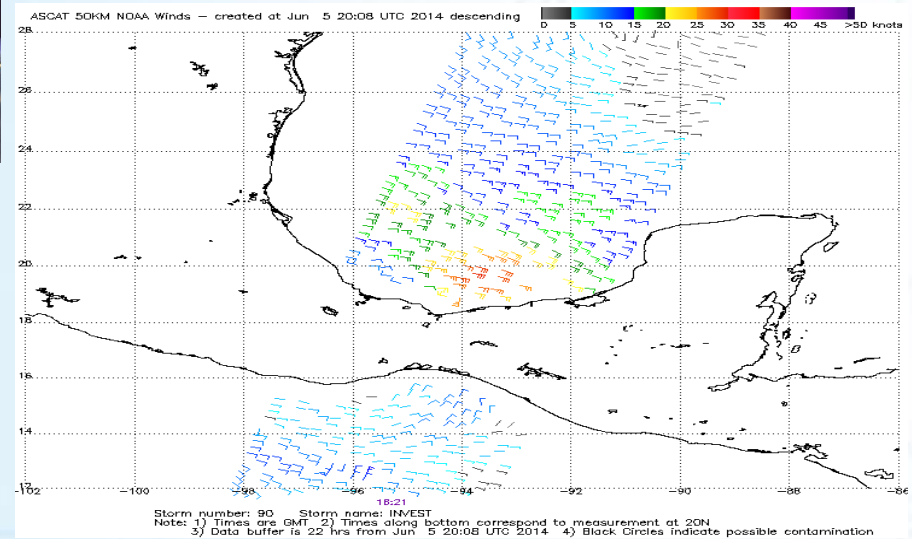
U10, NL, 3X3 KM



U10, NW EU, 9X9 KM



U10, Atlantic, 27X27 KM





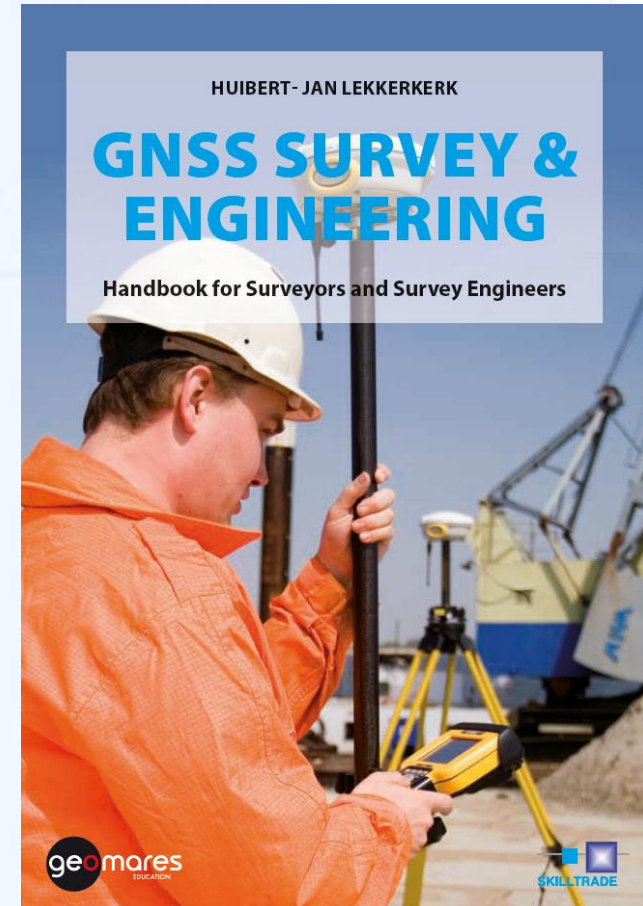
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Future developments

- Basic course Maritime science: a 5 day course with background information about e.g. IMO law, ISPS, Port organisation, danger at sea, navigation, cargo types
- Cooperation with Maritime Institute Willem Barentsz to provide a CAT A in English (in progress)
- Cooperation with Geo – ICT (HND education to promote Hydrography as associate degree)

Publications

- New book GNSS Survey & Engineering.
- Update Handbook of Offshore Surveying is coming end of 2017



“Since being accepted, both my theoretical and practical knowledge has developed considerably, with many opportunities to progress”



BIBBY 
OFFSHORE
because we love this business'

After graduation: “The candidate is then considered to be Graduate level and is ready and prepared for a full-time role“



SKILLTRADE



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