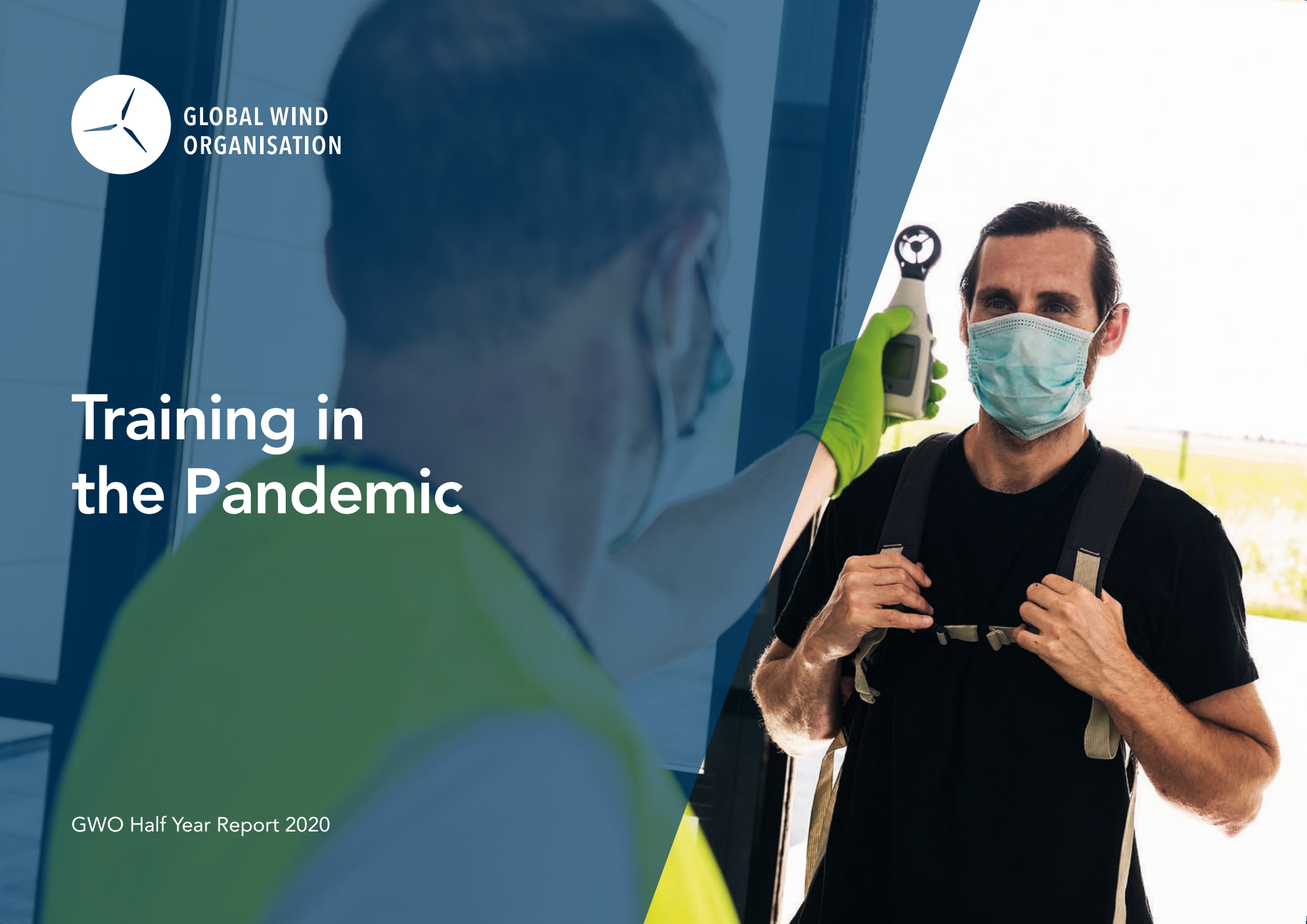




GLOBAL WIND  
ORGANISATION

# Training in the Pandemic

GWO Half Year Report 2020



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# Chairman's Statement



Paul Robbins, Chairman  
GWO Executive Committee,  
Chief H&S Specialist, Vestas

I was elected chair of GWO by my fellow members on 11th March 2020. At the time, most of us were only beginning to realise the gravity of the situation facing the world amidst a global pandemic which co-incidentally was declared official by the World Health Organisation the very same day.

We represent a group of safety and training professionals from the world's largest wind turbine manufacturers and owner operators. It has been amazing to witness my colleagues' consistently high performance levels as they manage the twin responsibilities of their day jobs and a commitment to maintaining a safer and productive workforce through GWO.

In the first half of 2020, GWO Leading Member Representatives and subject matter experts dedicated a total of 320 work hours and attended 60 meetings in the first half of 2020. On average each GWO member company had a repre-

sentative at 13 meetings at a total of 17.7 hours each. Adding in preparation time to review documents, agendas, minutes of meetings and action points would at least double that number in terms of amount of hours spent.

This level of dedication should not go unnoticed.

I would like to personally thank my colleagues on the Executive, Training and Audit and Compliance Committees, Regional Committees in China and North America, plus the working groups of subject matter experts who have delivered two updated training standards (Advanced Rescue/Enhanced First Aid V2.0), one new training standard (BSTR-P) and a revised set of Requirements for Training Providers and Certification Bodies.

In most cases, this work had to be completed virtually from our various lockdown locations so I applaud the way

everyone has conducted themselves during this testing period.

It is also with regret that we have had to say goodbye to a trusted colleague. Karin Borg, Vice Chair of the GWO Executive Committee since April 2019 has chosen to move on from her role at Siemens Gamesa Renewable Energy in September 2020 and will no longer work in wind power. Her unwavering support for GWO's mission, diligence to the work and objectivity in performing the role of Vice Chair are virtues I think we can all recognise and hope to find from our leaders.

The first half of 2020 has been the most challenging period many of us has ever experienced. I am proud to have helped guide Global Wind Organisation and its stakeholders on their journey so far and look forward to continuing our mission of creating an injury free working environment for this industry.

# Chief Executive's Review



Jakob Lau Holst  
CEO  
Global Wind Organisation

On 26 February 2020, Global Wind Organisation published a new long-term strategy "Safety without borders" describing how we strive towards our mission of an injury free working environment in the global wind industry.

The strategy, and its associated work plans, includes a goal of doubling the GWO Trained Workforce to more than 200,000 people by the end of 2022, in large part through annually doubling of the training provider network in North America, China and selected emerging

markets. An element of the strategy was to push towards digital learning solutions and facilitate more blended learning in the training provider community, scheduled as a feasibility study for 2020.

Then COVID-19 happened - the worst public health crisis in a generation. It has had a transformative effect on our societies, on our industry and the ways many of us work and live. Our mission and long-term strategy remain unaltered by COVID, but it has altered certain aspects and fast-tracked digitalisation of training.

When the World Health Organisation declared COVID-19 a global pandemic on 11th March, the GWO Executive Committee began convening in crisis mode, and started implementing business continuity and other mitigation measures. The ExCo quickly prioritised attention to availability or lack of training followed by the restrictions to travel

and attendance. We asked ourselves, how should we as an industry address the risks of skills fade amongst the global wind workforce, while still keeping the global workforce safe and operational in the face of both pandemic and lockdown?

This reality is reflected in the numbers. The first half of 2020 has seen more than 6,000 technicians lapsing their training, and training volumes have been collapsing in almost all markets during March, April and May. Then, as nations began to emerge, coming out of the first half of 2020, we have seen training numbers are up as much as 45% above the corresponding weeks of 2019, suggesting the training community is very busy catching up on lost time.

We have issued and updated COVID-19 guidance for the community since January providing advice on safe delivery of training, including digital learning

(remote delivery), flexibility measures for course participants, attendance and flexibility measures for auditors.

One month into the pandemic, we released the BSTR-partial based on virtual classroom delivery as a skills fade mitigation measure, and we updated training provider requirements to facilitate fast adoption of digital learning solutions.

The community responded positively and rapidly. In 2019, only one GWO training provider had implemented a blended learning solution. The first six months of 2020 alone saw some 36 training providers certified to deliver the BSTR-partial online, and an equal number certified to deliver blended learning solutions for full GWO modules. The digital transformation of safety training has begun, and it will give us yet another tool to bring safety training to technicians everywhere.

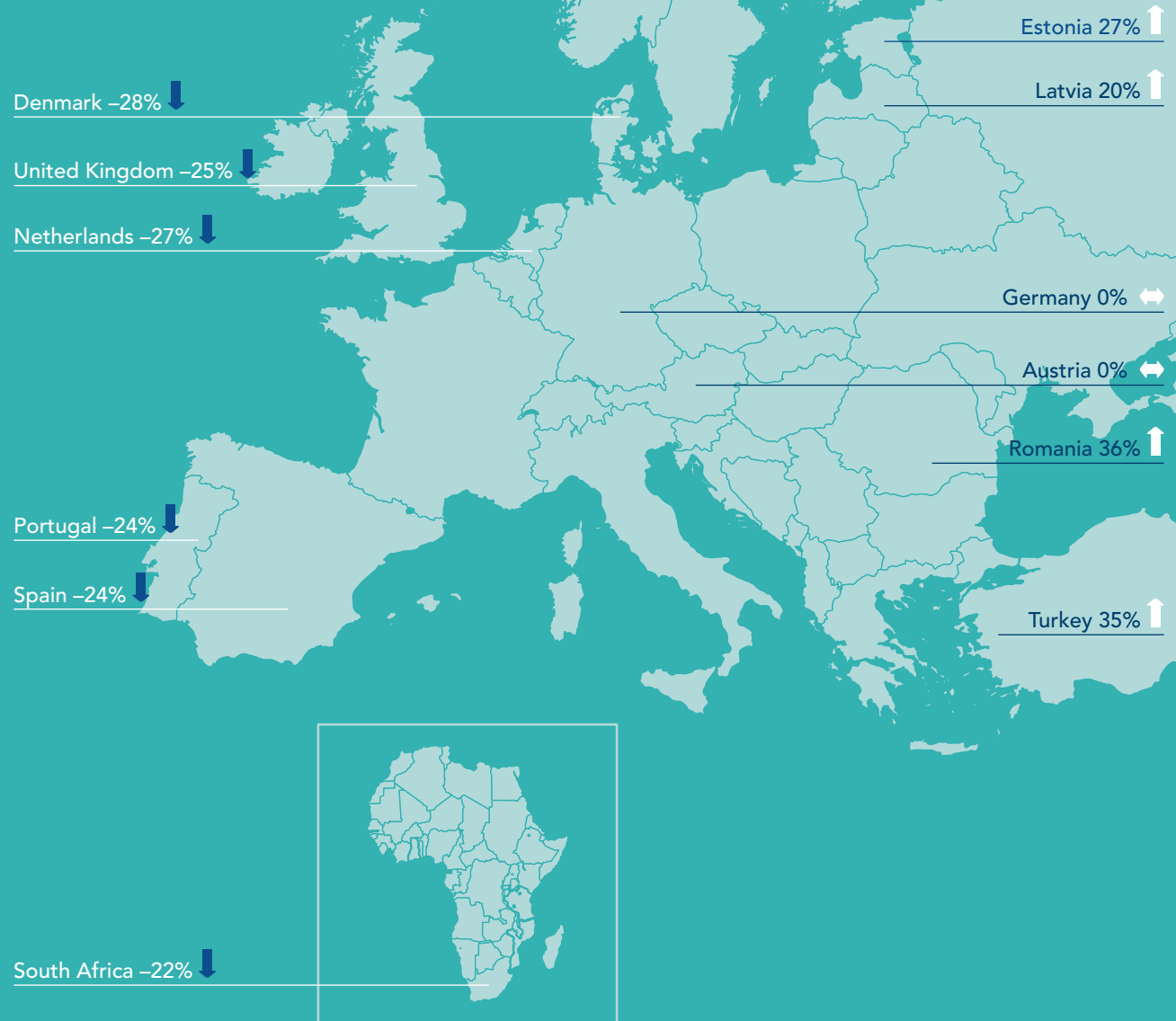
# Chapter 1

Training in the Pandemic

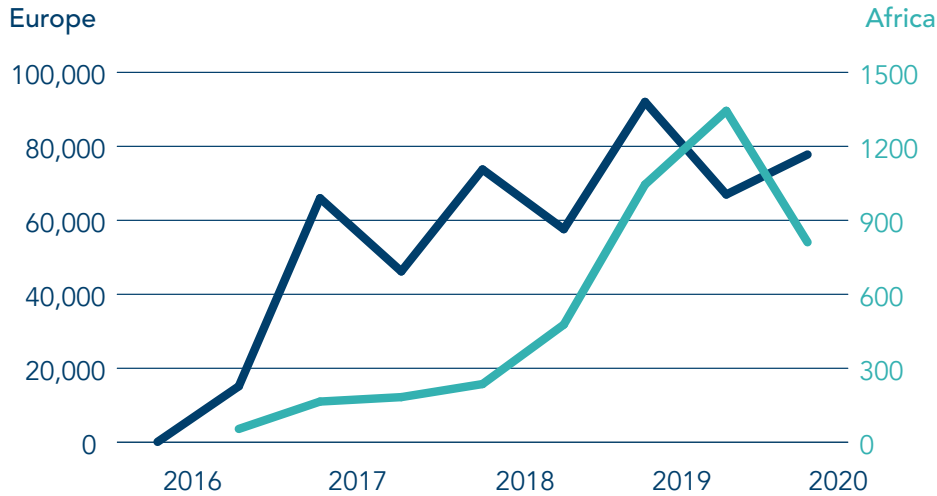
# Europe & Africa

Lockdown affected training volumes in Europe and Africa to a much greater degree than in the Americas or Asia Pacific. Overall, European training providers completed 16% fewer courses in the first half of 2020 against the corresponding period in 2019. South Africa is currently the only country on the continent with certified training centres. There, the market experienced a 22% fall in volumes.

As the graphic shows, Europe's largest markets for GWO training fell between 24% – 28%, with one notable exception in Germany where volumes were almost identical to the same period in 2019. Other countries of note include Poland (-1%), whose government imposed more flexible lockdown restrictions. There, several training providers continued to train throughout, adapting their operations to build in mitigation measures and reduce the risk of infection.



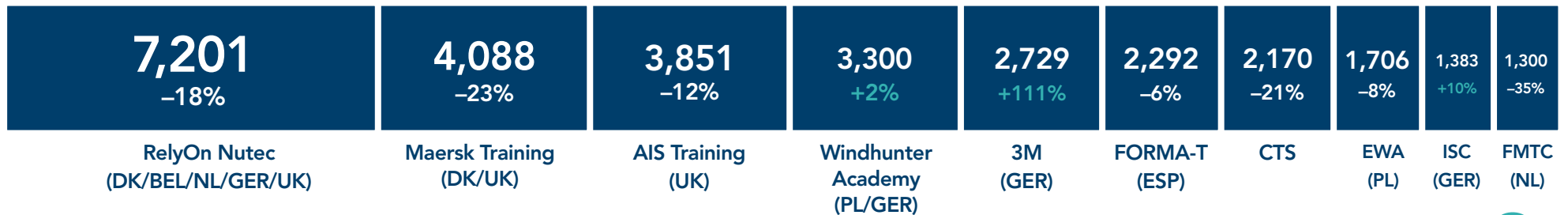
### Courses completed



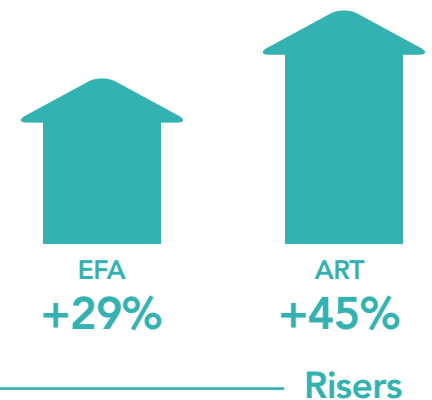
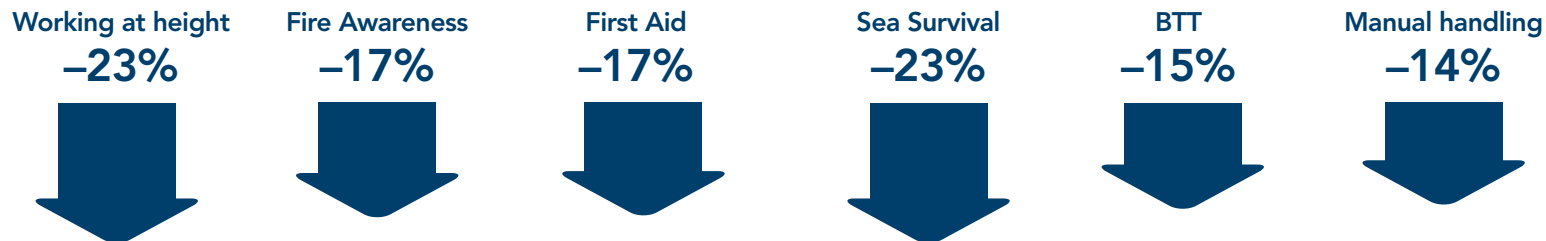
**-16%** fewer courses in first half of 2020

**78,595** courses completed

### Top 10 Training Providers



### Fallers



# ASIA/Pacific

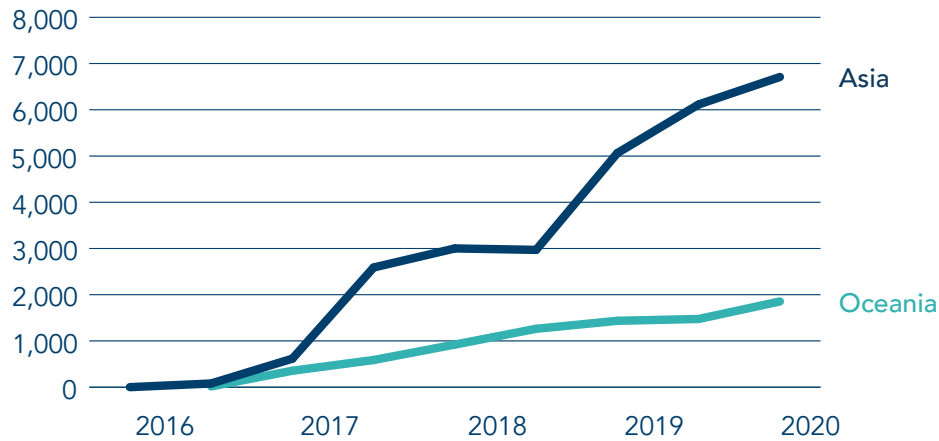
Most markets in Asia Pacific are classified as 'emerging' by GWO, with the standards establishing themselves as new training centres open for business.

As a result, the first half of 2020 saw a 10% increase overall in volumes despite lockdown conditions. This growth was driven by significant activity in new markets such as Taiwan where two new training centres remained open throughout the first half and China, where several new centres have opened their doors. Training in Australia also grew by 23%, New Zealand by 87% and South Korea by 36%. Training providers in India had a more challenging first half and this market fell by -33%, having been the most active across Asia/Pacific in 2019.





### Courses completed



# +10%

more courses completed in H1

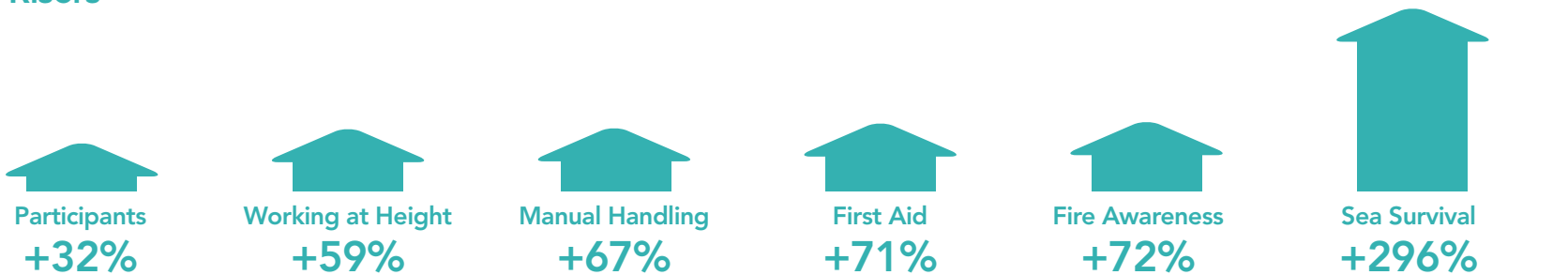
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## 8,563 courses completed

### Top 10 Training Providers

<b>885</b> (N/A)	<b>717</b> (N/A)	<b>692</b> +332%	<b>652</b> +87%	<b>573</b> -5%	<b>455</b> +358%	<b>442</b> +513%	<b>434</b> -20%	<b>428</b> +107%	<b>301</b> +46%
TIWTC (Taiwan)	NKUST (Taiwan)	Skylar Safety (AUS)	SGRE (CN)	Vestas (CN)	Windcare (India)	Nippon STC (JAP)	Thomson Bridge (AUS)	Goldwind offshore (CN)	Applus (KOR)

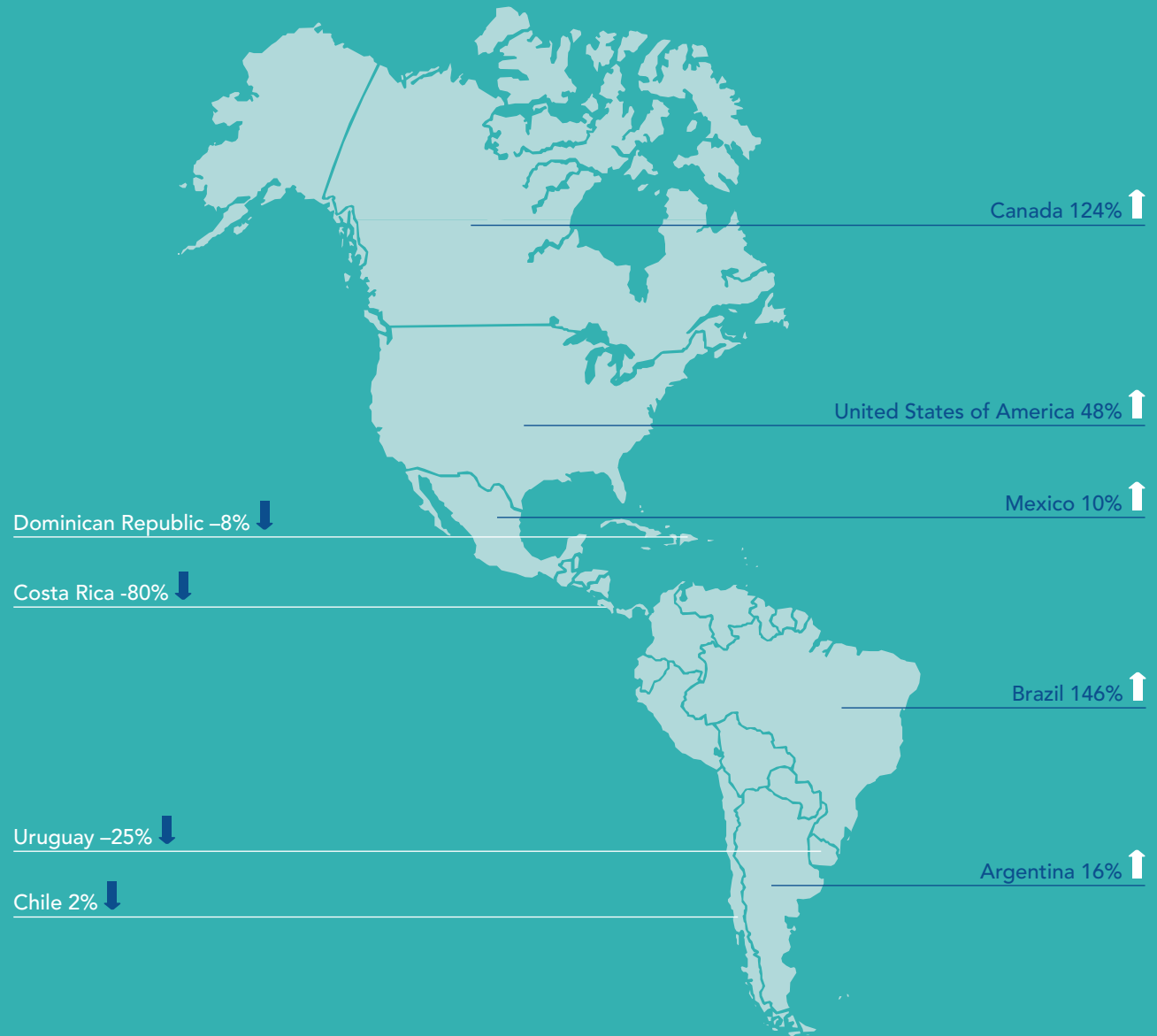
### Risers



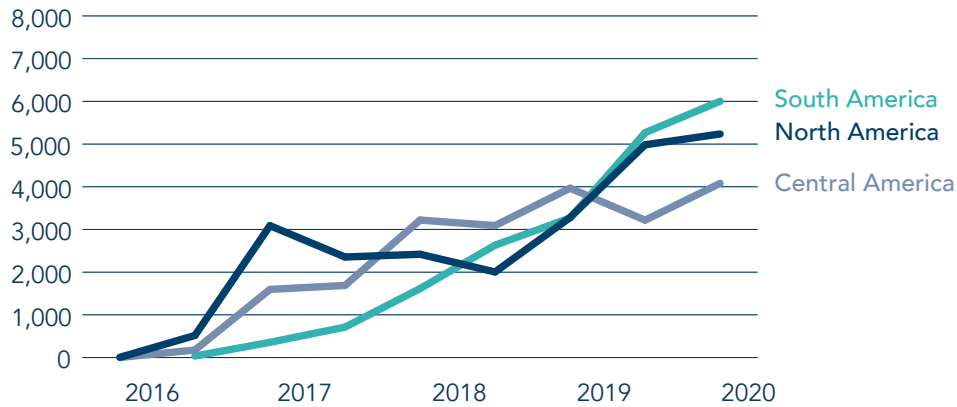
# The Americas

South America led principally by Brazil became the largest GWO training market by volume at the end of 2019. This trend continued in the first half of 2020 as Brazilian training providers more than doubled their activity (+146%), overtaking the United States of America for the first time. In North America, both the U.S and Canada experienced growth in GWO training volumes, despite challenging lockdown restrictions.

There are now double the number of training sites across North America. In Canada, the two sites providing GWO more than doubled their training, completing 734 modules in the first half. In central America, the story is mixed. Mexico, a historically strong market for GWO training, remains buoyant and saw an increase of 10%. Costa Rica, one of the region's most influential countries for sustainable development experienced a sharp decline, dropping 80%.



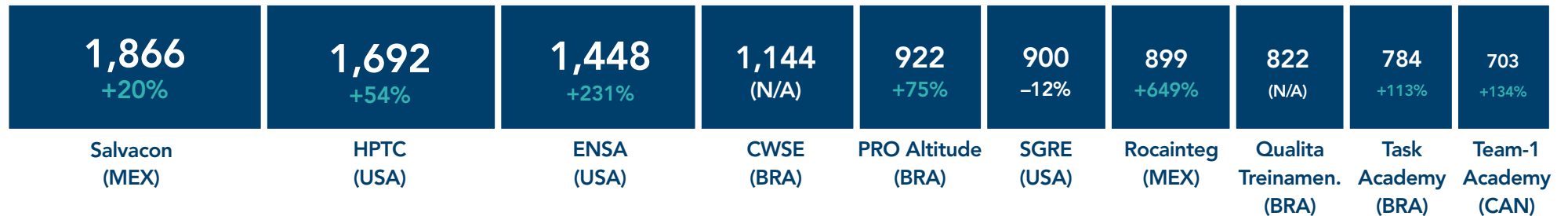
### Courses completed



**+47%**  
more courses completed in H1

**15,319** courses completed

### Top 10 Training Providers



### Risers



# North America Focus



Wesley Witt  
Chair  
GWO North America Committee

GWO has made significant progress in the past eighteen months in North America and I am extremely grateful for the hard work and dedication of our members who have set a clear vision and work plan to help drive adoption of the standards in the US and Canada.

None of this would have been possible without the leadership of my predecessor, Brian Walencik, formerly of GE Renewable Energy, who chaired the

Committee during its first years and left me with a solid foundation.

The GWO North America Committee can today count on the support of eleven owner operators and wind turbine manufacturers from across the continent. More have expressed a willingness to join our organisation and I look forward to welcoming them.

As large employers, our collective commitment to use GWO standards has given the market a strong motivation to invest in new training provider certifications and for certification bodies to enter the sector. In 2020, GWO training courses completed in North America rose by almost 50% and despite of the Pandemic, we remain on course to meet our annual target of doubling 2019's numbers for new certifications, courses completed and certification bodies able

to audit GWO training centers. I thank all our GWO training providers across North America who have safely delivered training throughout the past several months by making modifications to facilities and classrooms, among other actions, while continuing to help achieve our vision of an injury free work environment.

## Aligning standards for North America

Our work has also seen members take a deep dive into GWO standards themselves. We have put in process the 'North Americanization' of GWO standards so that they reflect our regulatory and cultural norms. While this does not result in many alterations to the content of the standards themselves, it makes them accessible for our instructors, business leaders and other stakeholders to deploy as a tool for safety training. The project has global significance; it is being replicated in other regions includ-

ing China and Australia as we speak and means the standards can work for our industry everywhere.

Notwithstanding the impact of the Pandemic, our workforce must keep turbines spinning and they must enter their place of work with the right skills and knowledge to be safe.

Therefore we endorse the GWO strategy: Safety without borders. We collaborate as major employers and pool resources to make real progress based on a collective vision. North America has a major part to play in the organisation's strategy to build a GWO-trained workforce of 200,000 people worldwide by the end of 2022. The industry is growing rapidly here on and offshore and the foundation of a standardised safety and technical training framework will have huge benefits for all concerned.

# Chapter 2

Reopening after lockdown

# Managing the backlog

The declaration of COVID-19 as a Global Pandemic by the World Health Organisation was announced on 11th March (week 11). Prior to this point, GWO training volumes were 10% higher than during the same period in 2019.

The WHO declaration and subsequent lockdown of most countries to protect their populations had a significant influence on global training activity. By the following week 12, volumes fell by -49% and by week 15, activity had dropped by -86%.

Overall, there were 15% fewer courses completed globally over the first half of 2020 compared to the previous year. Few markets were untouched by the Pandemic (see Chapter 1 for more information) and GWO's busiest regions in Europe experienced some of the highest falls. Denmark, the United

Kingdom, Spain and the Netherlands all dropped by at least -24% during the first half of 2020. A minority continued to train during the pandemic, some at full capacity, including markets such as Poland and Taiwan. These trends are analysed further in Chapter 1.

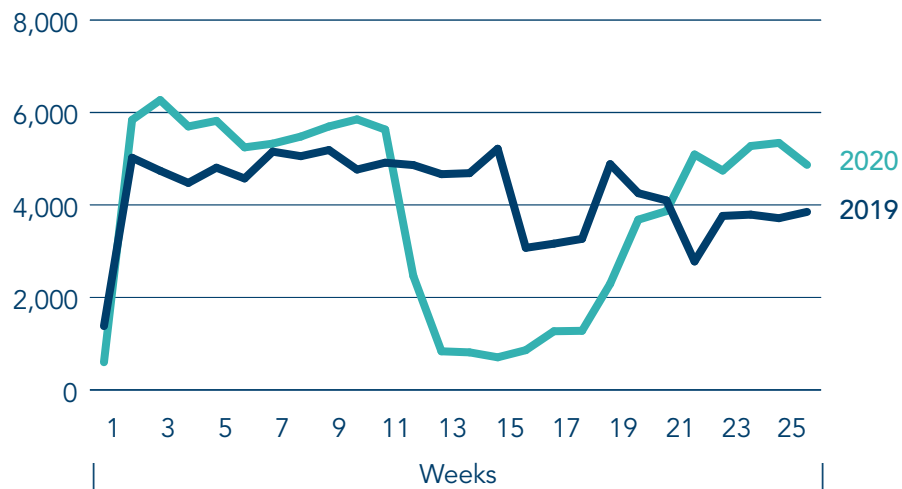
## Impact on trained workforce

Prior to lockdown, the GWO Trained Workforce was heading towards 100,000 people. By the end of Q1 2020, there were 97,810 people with a valid GWO training record, a 10% rise on Q4 2019.

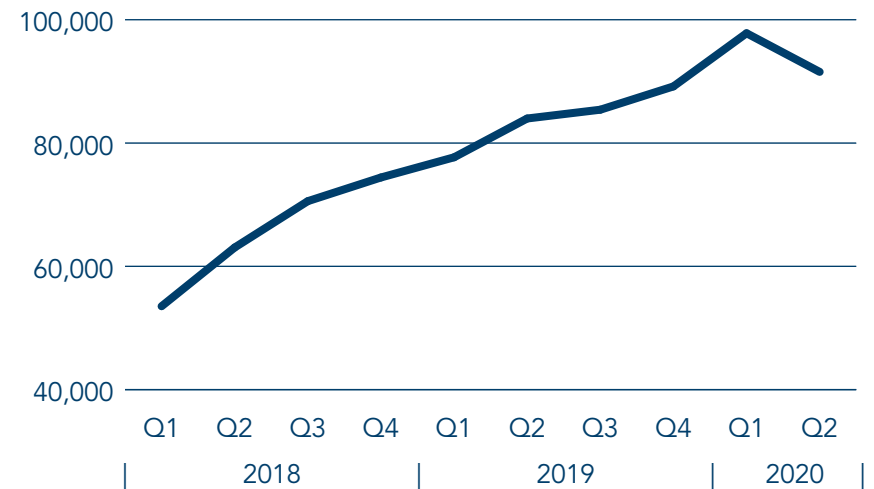
The Pandemic reduced this by over 6000 people, creating a range of challenges for technicians and their employers including the potential risk of skills fade amongst the workforce as many were unable to refresh basic safety training. This topic is analysed in Chapter 3.



### GWO courses completed



### GWO trained workforce



# Market expectations Q3 2020

The Pandemic created a substantial backlog of training and the GWO Network made every effort to re-open safely when their local governments permitted. The numbers of completed courses rose quickly from Week 22 (+83%) and each week during June, as the network experienced a year on year rise of 34% (see previous page). This is significant

given the summer period is typically associated with a fall in training volumes as construction, installation and O&M activity pick up speed.

### Forecast Q3

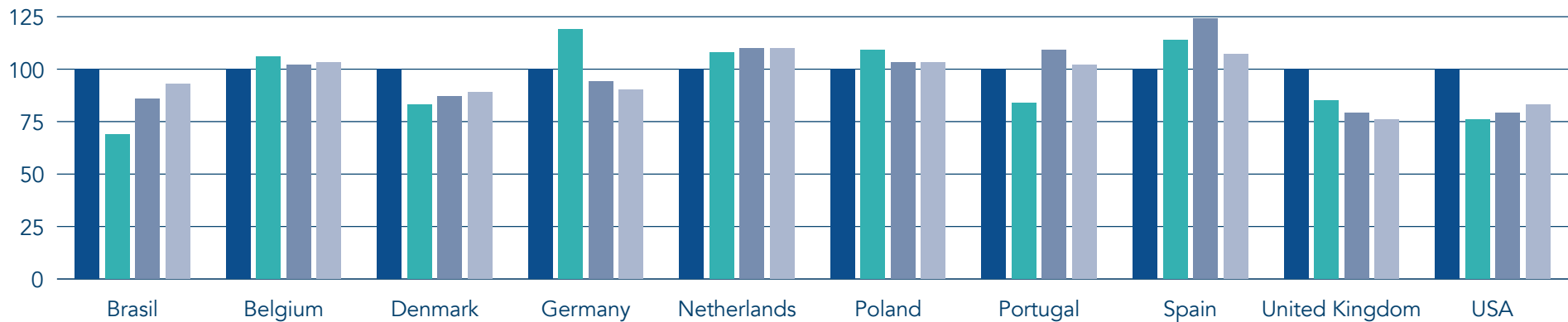
In addition to a review of completed training, we conducted a survey amongst the GWO network to under-

stand what likely volumes training providers expected in July-Sept 2020.

The results broadly align with trends to the end of Q2 with training providers expecting to be busier than the corresponding period in 2019, as they make up for the inactivity of lockdown.

The markets showing the most confidence are Germany, Spain and Poland, with increased volumes as much as +20 % expected during the third quarter. Denmark, the United States and the United Kingdom present a more pessimistic outlook, with training providers there expecting around 20% fewer courses completed in Q3.

## Top 10 GWO Markets – Expected training volumes Q3 2020\*



Average monthly uploads 2019 (normalised)    Expected % July 2020 v July 2019    Expected % Aug 2020 v Aug 2019    Expected % Sept 2020 v Sept 2019



# Chapter 3

Adapting to Change:  
GWO Operations Report

# GWO Help Centre

The GWO Network has grown exponentially since the body's formation in 2012. The introduction of WINDA in 2016 accelerated this growth, which has occurred in parallel with a focus on maintaining our governance system.

The resulting impact on GWO operations has also been significant. Investments in IT infrastructure have been made to support WINDA's growing user community who require greater functionality to manage the constantly increasing number of training records maintained on the site. In 2020, WINDA surpassed 500,000 records and at current growth rates will reach one million potentially as soon as the end of 2021.

The GWO Help Centre manages an ever-increasing volume of enquiries and activity has grown both from the network's organic activities – new training provider certifications, extensions, standards etc – but also from the impacts of the COVID-19 Pandemic.

In the first half of 2020, the number of enquiries to the GWO Help Centre grew by 95%, averaging 26 per day. Enquiries arrive from over 40 countries where training providers are located, plus additional regions where GWO is developing. On a positive note, the number of enquiries that were solved with a single response from our customer service team rose from 62% in the first half of 2019, to 65% this year.

We also measure satisfaction ratings from enquiries and again, this resulted in positive news for 2020, where the overall satisfaction rating increased to 91.5%.

However, given the volume and complexity of changes introduced to mitigate the effects of the COVID-19 Pandemic, the team were unable to solve as many enquiries as quickly as they did in the first half of 2019. Last year, more than 90% of enquiries were solved within 24 hours. This reduced to 52% in the first half of 2020.

The reason for this drop can be linked to several factors. Firstly, as identified the number of enquiries doubled with stake-

holders requesting support in relation to multiple issues including:

- The development and implementation of the new WINDA platform
- Applications from participants and training providers for 60-day extension for expiring records during COVID-19 lockdown
- Supporting implementation of updated Requirements for Training Providers & Certification Bodies
- Help and advice on implementing BSTR-P

**522 enquiries per month**

**131 enquiries average per week**

**26 enquiries per day**

2019 Half Year 1 Enquiries count 1,625  
2020 Half Year 1 Enquiries count 3,168



2019 Half Year 1 One-touch enquiries 62.6%  
2020 Half Year 1 One-touch enquiries 65.1%



2019 Half Year 1 Satisfaction Rating 90.6%  
2020 Half Year 1 Satisfaction Rating 91.5%



# Training Standards Development and Governance Review

GWO Leading Member Representatives and subject matter experts dedicated 320 work hours and attended 60 meetings in the first half of 2020.

Aside from the standing committees (Executive Committee, Training Committee and Audit & Compliance Committee), GWO members provided subject matter experts to support the review and update of The Advanced Rescue Training Standard (V2.0), the Enhanced First Aid Training Standard (v2.0) and the updated versions of the Requirements for Training Providers and Certification Bodies.

## Digital delivery and remote audits permitted

Originally planned for release in Q4 2020, GWO fast tracked several digital options to support training providers

and certification bodies as the Covid-19 lockdown intensified.

Versions 7 and 9 of the certification bodies and training provider requirements were published on 21st April. 'Digital delivery' is now a fourth setting alongside the three existing ones (fixed, mobile, onsite/field), meaning training providers with a valid certification could pursue new technologies as part of their facilities makeup.

Certification bodies are permitted to conduct remote audits, which was implemented as an interim measure until the end of 2020, with a view to establishing a permanent requirement in the near future. Remote auditing is not available for initial or extensions of existing certificates, but can be applied for stage one audits, surveillance audits,

recertification and extensions to existing digital delivery.

## Advanced Rescue and Enhanced First Aid

Almost 8000 ART and EFA modules were completed in the first half of 2020 and new versions were published on 1st April. Key changes to both standards included a new format to enhance readability and a simplified layout. For EFA specifically, there has been no change to the course duration and some minor lesson content changes and a more global perspective reference to the International Liaison Committee on Resuscitation (ILCOR).

The ART standard review saw some alterations in the course duration, with the main standard reducing by almost one hour and 15 additional minutes added to the refresher version. Participants completing the ART refresher previ-

ously received a record for Working at Heights. Following the review, this now includes Manual Handling as well.

## Auditor Qualification Training – online

GWO Auditor Qualification Training (AQT) will become a hard requirement from April 2021 and we have created an online course for participants, which was launched in September 2020. The training would have occurred in the first half of 2020, unfortunately courses were canceled across three continents owing to the impacts of the Pandemic.

## Audit Reports Required

From 1 October 2020, certification bodies are required to provide audit reports to GWO as part of the certification process. This hard requirement was included in version 7 of the Requirements for Certification Bodies published on 21 April.

# Chapter 4

The GWO Worldwide Training  
and Certification Network

# The GWO Training Network

There were 356 GWO Certified Training Providers around the world by the end of June 2020. 39 new sites joined the network during the first six months and enquiries from prospective training providers remain strong despite the challenges of COVID-19.

## North America

Owner operators and wind turbine manufacturers continue to increase their demand for GWO standard training in both the US and Canada. The GWO North America Committee set ambitions to reach 16 sites and over 10,000 courses completed during 2020.

So far (COVID-19 notwithstanding) an increase in training volumes has set the market on course for this target. Meanwhile the number of sites has reached 17 in total across three provinces and ten states.

## Central and Latin America

Two new certifications in Argentina added to a fast-growing network across the continent. Brazil enjoyed a significant rise in courses completed during the first half of 2020 and with Mexico included, Central and South America surpassed 10,000 courses completed for the first time.

## Asia/Pacific

Australian training provider sites increased substantially in the first half of 2020, with five new centres opening their doors. South Korea and India both saw one new site added, and two further opened in China.

As our regional review (see page 12) confirms, the Asia/Pacific region experienced widely varied impacts from the Pandemic. Taiwanese training providers operated successfully through the lock-

down, while India suffered a larger fall as restrictions took their toll.

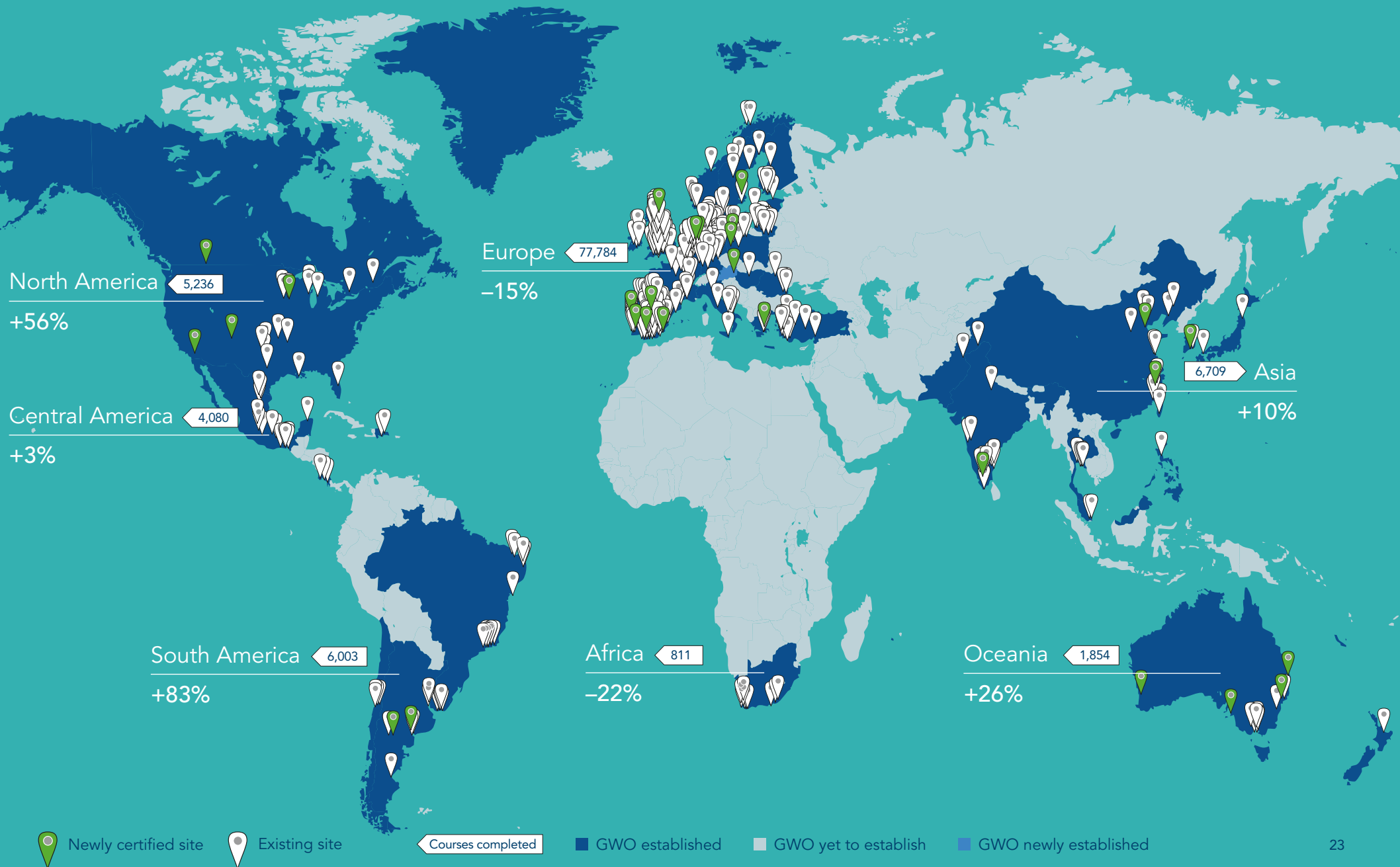
## Europe and Africa

20 new training centres opened across Europe and Africa in the first half of 2020. Spain saw eight new certifications, while Germany, Portugal, Poland, the UK and Sweden had two new sites each. South Africa remains the only country on the continent where GWO training is available. With a fall in courses completed and many centres closed for long periods, this market has experienced challenges, but remains a positive beacon for safety training as the industry develops.

## New Training Providers



# GWO Certified Training Providers





# The GWO Worldwide Certification Network

A trio of new certification bodies joined the GWO worldwide network in the first half of 2020, bringing the network to 43 in total.

## The Americas

Competition is strong across the Americas, with 13 certification bodies responsible for the certifications of 30 training centres in North, Central and South America. As awareness of the standards

grows, we anticipate local offices of global certification bodies to encourage their lead auditors to join the market.

## Europe and Africa

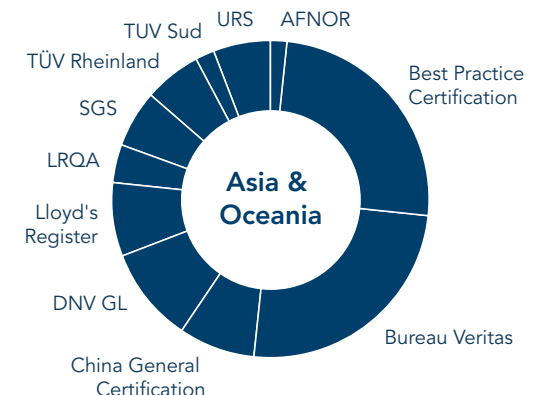
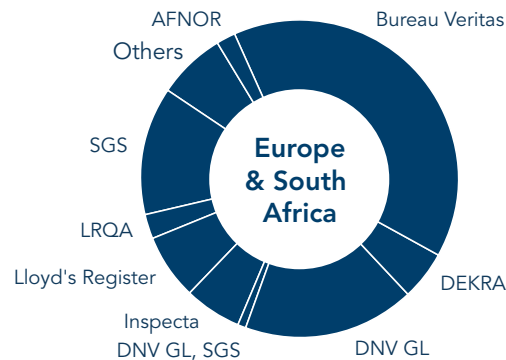
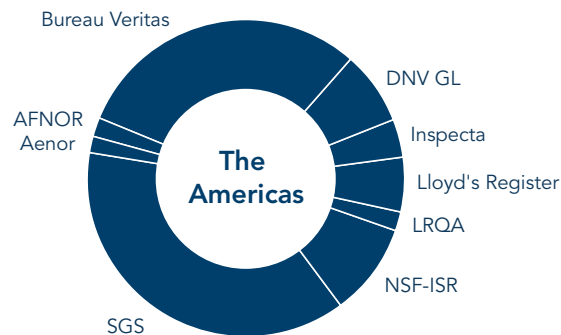
19 certification bodies are responsible for the current 287 certifications of GWO training providers in Europe and Africa. With a depth of experience from most of the main providers, GWO is supporting their work in maintaining

good governance with the introduction of online Auditor Qualification Training courses and we expect an increase in usage of new tools such as the opportunity to provide remote audits in the right circumstances.

## Asia/Pacific

13 certification bodies are responsible for the current 50 certifications of in Asia/Pacific. Companies in China,

India, South East Asia and Australia are demonstrating a strong commitment to the market and are responding to demand by engaging closely at a regional level with groups such as the GWO China Committee. Again, local provision of GWO AQT courses in the second half of 2020 will provide a new market entry method for auditors.





# Chapter 5

GWO Network Training Data  
First half 2020

# GWO certificates (all modules)

	2018	2019	2020
<b>Argentina</b>		444	514
ALTO SUR, S.R.L.			48
CSB Argentina		84	38
Gestión y Servicios Eólicos (GSE)		202	288
SALVACÓN, S.C. Argentina		158	140
Australia	760	1304	1607
Canberra Institute of Technology	70	195	68
Federation University Australia		9	27
Fire and Safety Australia	324	356	258
Skylar Safety		160	692
Thomson Bridge Pty Ltd	175	360	434
Total Height Safety Pty Ltd	37	88	
Wright Training Pty Ltd	154	136	128
<b>Austria</b>			149
Marischka GmbH & Co KG			149
<b>Belgium</b>	2163	2719	2013
Industrial Safety & Emergency Consult	946	825	527
RelyOn Nutec	1217	1858	1427
Skilliant cvba		36	59
<b>Brazil</b>	846	1894	4651
CWSE BRASIL COMPANY LTDA			1144
HIGH SERVICE TRAINING			221
Maersk Training Brasil Treinamentos Marit.		42	89
PRO Altitude	846	524	922
QUALITA TREINAMENTOS & GESTAO			822

	2018	2019	2020
STORZ SERVICOS TECNICOS LTDA		960	669
TASK ACADEMY - CLAUDIA MARIA SILVA.		368	784
<b>Canada</b>	285	328	734
New Heights Inc & Nouvelle Hauteur Inc.		28	31
TEAM-1 Academy Inc.	285	300	703
<b>Chile</b>	123	486	497
GRUPO SALVACON SPA	40	85	100
Ingeteam SpA	82	64	40
PRYAS CAPACITACION LIMITADA		16	68
Training Team Rescue	1	321	289
<b>China</b>	621	1384	1925
ALIMAK Group Manufacturing (Shanghai)	128	69	49
Envision Energy Co.LTD		149	62
Fujian Offshore Wind Operation and Main.		8	97
Goldwind offshore wind training center		206	428
Shanghai Electric Wind Power Group Nan.			64
Siemens Gamesa Renewable Energy Tech.	465	348	652
Vestas	28	604	573
<b>Costa Rica</b>	127	318	65
Formacion de Rescate Profesional	5		
Total Health Safety Enviroment SL	122	318	65
<b>Denmark</b>	8551	9812	7093
ALIMAK Group Denmark A/S	24	19	11
Amu-Vest	7		
Global Wind Academy		422	557

	2018	2019	2020
International Wind Academy Lolland A/S	332	212	348
Maersk Training A/S	3033	2761	1860
Maersk Training Svendborg			27
MARTEC	422	241	254
MHI Vestasoffshore Wind A/S			64
Nordjyllands Beredskab Uddannelsescenter	86	51	79
RelyOn Nutec	2678	2833	2341
RESC Rednings og Sikkerhedscenter	125	222	91
Rescue Center Denmark	847	679	319
Siemens Gamesa Renewable Energy A/S	997	2345	1127
Uddannelsescenter Holstebro		27	15
<b>Dominican Republic</b>		91	84
INPROCA - SALVACÓN, S.R.L.		91	84
<b>Estonia</b>	121	170	216
Reval Marine and Offshore Training	121	170	216
<b>Finland</b>	283	368	278
Cresto AB	61	83	58
Wind Controller	41	106	18
Wind Controller Oy	181	179	202
<b>France</b>	792	1115	875
3M ITFH training Center Paris		1	
ACCSYS	99	216	62
ALPIC	41	48	29
APAVE	2		
BZEE Academy GmbH	80	65	36

	2018	2019	2020
CEPS	150	119	139
Cresto AB	110	251	267
GRETA DU GARD			36
GRETA du Maine	35	84	101
Institut de formation Socotec	178	139	90
Justy Ingénierie Énergies	97	192	115
<b>Germany</b>	<b>13789</b>	<b>13889</b>	<b>13890</b>
3M - Capital Safety Training Center	3253	1453	2729
3M - Capital Safety - Mobile Unit	20		
Aeroconcept Ingenieurgesellschaft	84	65	83
Alpintec GmbH	482	429	402
blade care GmbH			19
BZEE Academy GmbH	12		
Deutsche WindGuard Offshore GmbH	845	818	989
Deutsche Windtechnik Service GmbH	763	454	462
GE Renewable Energy Learning Center	2	17	
German Wind Academy GmbH	672	1010	365
Hailo Wind Systems GmbH & Co KG	136	225	69
Heinemann Projektberatung	730	1456	1101
ISC Training & Assembly GmbH	1030	1260	1383
O.S.T. Cuxhaven GmbH & Co.KG	641	592	422
OffTEC Base GmbH & Co. KG	604	1265	1002
PEPER energy GmbH		129	204
PSA Sicherheitstechnik GmbH & Co KG		9	
PSA Zentrale	108	151	538

	2018	2019	2020
RelyOn Nutec	2904	3012	2397
RescOff GmbH	487	578	463
Rope Access Solutions GmbH	16	7	
Seilpartner GmbH	322	69	101
Senvion GmbH		94	163
SHE Solution Bergmann GmbH & Co. KG		38	7
Siemens AG	383		
Skylotec - Germany	186	302	104
Steady Climbing GmbH			84
Triowind GmbH	15	39	20
Windhunter Academy GmbH	94	417	783
<b>Greece</b>	<b>253</b>	<b>675</b>	<b>624</b>
ACTIVE POINT SA	29	98	271
GEP	224	577	353
<b>Hungary</b>	<b>149</b>	<b>304</b>	<b>188</b>
Siemens Gamesa Renewable Energy Kft.	149	304	188
<b>India</b>	<b>1666</b>	<b>2300</b>	<b>1552</b>
EDUFORCE	112	563	191
EMSAFE FIRE SAFETY SOLUTIONS PVT			70
Karam Training & Consultancy	135	72	112
Maersk Training India Pvt. Ltd.	237	228	212
RS Windtech Engineers Pvt. Ltd		44	160
Siemens Gamesa Renewable Power Priv.		74	
USHA FIRE SAFETY EQUIPMENT PVT LTD.	870	881	182
Vestas Wind Technology India Private	312	343	170

	2018	2019	2020
Windcare India Private Limited		95	455
<b>Ireland</b>	<b>489</b>	<b>574</b>	<b>512</b>
Access Rescue Consulting at Height Ltd	289	315	352
H&MV Engineering Ltd	5	26	22
Renewables Academy	195	213	128
SEFtec NMCI Offshore Ltd.		20	10
<b>Italy</b>	<b>975</b>	<b>847</b>	<b>763</b>
ASL Azienda Sicurezza Lavoro	144	100	140
Form UP S.r.l.	48	73	48
General electric international INC.	19	5	6
IVPC Service srl	164	133	105
O.T.I. SERVICE SRL	235	189	92
Padrone s.r.l.	159	160	234
PARCO DELLA VITA SRL	206	187	138
<b>Japan</b>	<b>42</b>	<b>217</b>	<b>522</b>
EOS Engineering & Service Co., Ltd.		145	80
Nippon Survival Training Center	42	72	442
Korea (Republic of)	181	221	301
Applus Korea	181	221	301
<b>Latvia</b>	<b>927</b>	<b>1199</b>	<b>1434</b>
Baltic Offshore Training Centre SIA	558	677	828
IQTC Management	224	290	276
Novikontas Maritime College	145	232	330
<b>Lithuania</b>	<b>943</b>	<b>1465</b>	<b>1217</b>
Baltic Offshore Training Centre UAB	44	443	241

	2018	2019	2020
MB Globalus mokymai	671	505	412
NOVIKONTAS Maritime Training Centre			154
UAB Gridins Enterprise LT	112		
Vinda LT	116	517	410
<b>Malaysia</b>		<b>5</b>	<b>62</b>
MSTS Asia Sdn Bhd		5	62
<b>Mexico</b>	<b>3093</b>	<b>3558</b>	<b>3931</b>
Buzos Inspectores Asociados S.A. de C.V.	307	364	173
Camara Decimavilla Mexico SA de CV	437	233	220
GRUPO BIA - Climbex		20	
Ingeteam SA de CV	808	815	255
Operadora Acceso Vertical de México SA	211	139	134
Renewable Energy Training Mexico		67	77
ROCAINTEG SA DE CV		120	899
Salvacon SC. México	1330	1556	1854
Salvacón, s.C. Salvamento y Consultoría			12
Trabajos en Alturas SA. de CV.		244	307
<b>Netherlands</b>	<b>4229</b>	<b>4874</b>	<b>3555</b>
Ascent Safety bv	368	244	344
D.H.T.C.-Den Helder Training Centre B.V.	34	100	6
De Ruyter Training & Consultancy B.V.		55	45
Delta safety training	850	1098	672
Emergency Control Medical Training B.V.		64	186
FMTC	1607	2036	1300
Industrieel Klimmen BV	129	231	249

	2018	2019	2020
Orange Access	99		
R3B Safety & Rescue		35	
RelyOn Nutec	604	562	414
Safe Site Valbeveiliging	215	168	37
STC-KNRM	251	276	294
Verticaal Transport Centrum BV	72	5	8
<b>New Zealand</b>	<b>162</b>	<b>132</b>	<b>247</b>
Vertical Horizonz New Zealand Limited	162	132	247
<b>Norway</b>	<b>269</b>	<b>377</b>	<b>262</b>
Arcos AS			24
Cresto AB	247	167	125
Energy Innovation			62
Westcon Løfteteknikk AS	22	210	51
<b>Pakistan</b>	<b>40</b>	<b>135</b>	<b>109</b>
Albario Engineering Pvt Ltd.	40	135	109
<b>Philippines</b>	<b>386</b>	<b>186</b>	<b>191</b>
Consolidated Training Systems Inc.	386	186	191
<b>Poland</b>	<b>5059</b>	<b>7383</b>	<b>7346</b>
Akademia Morska w Szczecinie	512		
CSW TOTEM sp. Z o. o. s.k	456	248	156
EUROPEAN WIND ACADEMY SP. Z O.O.	1342	1895	1706
Global Wind Consulting			49
Global Wind Consulting sp. z o.o.			1
HAWK Centrum Szkole Specjalistycznych	122	191	92
HIGHWORK s.c.			321

	2018	2019	2020
Szkoła Morska w Gdyni Sp. z o.o.	371	762	720
VULCAN Training & Consultancy Sp. z o.o.		908	1200
Wertykal s.c.	281	579	584
Windhunter Academy sp. z o.o.	1975	2800	2517
<b>Portugal</b>	<b>2228</b>	<b>3309</b>	<b>2524</b>
Centrajuste - CEDROS Lda.	50	325	291
CIFESP, Lda	49	52	8
Codinfor - Consultoria & Formação Lda	226	346	263
Factor Segurança Lda	114	243	77
GRWind	108	157	76
GRWind Academy			11
Jorge Lozano Lda.	342	180	217
Mário Sequeira Barroso Unip Lda	475	423	254
OnRope Unipessoal Lda	686	1357	1274
Outside Works Lda	178	226	19
TRANSGRUA SA			34
<b>Romania</b>	<b>1346</b>	<b>1644</b>	<b>2233</b>
S.C. WIND POWER ENERGY S.R.L (WPE)	964	1150	1223
SC SOLO SRL	382	494	839
Vestas CEU Romania SRL			171
<b>South Africa</b>	<b>236</b>	<b>1045</b>	<b>811</b>
AID Renewables	150	368	118
Altitec South Africa Pty. Limited			12
High Angle cc		350	283
SARETEC - South African Renewable Ener.	42	85	51

	2018	2019	2020		2018	2019	2020		2018	2019	2020
Sp wind (PTY) Ltd	44	242	347	GRUPO STIER XXI, S.L.			12	Trainek - Grupo Lider System	385	728	147
<b>Spain</b>	<b>11154</b>	<b>15322</b>	<b>11668</b>	Hicom	181	666		Training Team Rescue S.L.	217	132	107
Academia de Enseñanza Newton Villalba			77	Ilunion Fuego Y Conduccion, S.A.	38	3	1	TREBIKAL, S.L.	28	24	41
ACCÉS SEGURIDAD VERTICAL S.L		3	40	Inaudita Formación y Consultoría SL	168	206	167	VERTICAL SAFETY, SL		4	95
Adventis Solutions Camara Decimavilla S.L.	334	612	750	INDRA Sistemas S.A.	52	201	87	VERTICALIA SERV. DE FORMACION	12		
AGUADO WIND SERVICES S.L.	104	514	41	INGETEA POWER TECHNOLOGY S.A.	761	761	406	VESTAS EOLICA SAU		146	323
ALIMAK Group, S.L		42		LEVEL INSTRUKTA s.l.			188	Ynfiniti Engineeering Services S.L. - Spain	149	258	197
ALTIUR FORMACIÓN Y PREVENCIÓN, S.L.	311	556	393	MANTROL SERVICIOS S.L –		66	45	<b>Sweden</b>	<b>1126</b>	<b>1560</b>	<b>1516</b>
ASAKEN S.COOP.	96	184	129	Norcap Noerte s.l.u	51	98		Aptum Fallskydd AB	24	31	15
Autoescuela Novel e Instituto Cefa, U.T.E.		233	37	PREVinsa Wind - Madrid	731	412	342	C2 Vertical Safety AB	45	394	485
Conapro (comercial navarra de protección)	555	940	550	PREVinsa Wind - Mobile unit	192	221	225	Cresto AB	246	428	461
Cota Limite S.L.U.		126	71	PREVinsa Wind - Valencia - Cofrentes	8			Klättertchnik AB		59	
Cualtis Formacion, s.l.u			6	Seguridad Gallega Nosa Terra S.A.	231	306	369	NUAB	48	72	180
CUALTIS FORMACIÓN, S.L.U.	46	88	48	SERVIGASA SPECIAL JOBS SL	48	13		Rope Access Sverige AB	512	218	214
CUALTIS FORMACIÓN, S.L.U. - Madrid	54			SGS ESPAÑOLA, S.A.U.	159	25		Skylotec - Sweden	126	281	100
DEUTSCHE WINDTECHNIK, S.L.	28	205	201	SGS TECNOS S.A.	69	227	60	V.Pro AB	125	77	61
E.P.E. Sociedad de Salvamento y Seguridad	10	7		SGS Tecnos, S.A.			65	<b>Taiwan - Province of China</b>		<b>69</b>	<b>1602</b>
EASTAV Global S.L.U.	176	137	219	SGS Tecnos, SA		90	114	National Kaohsiung University of Science			717
EROM (Energías Renovables Operación	1378	1277	1068	Siemens Gamesa	146	15		Taiwan International Windpower Training		69	885
Escuela Europea de Maquinaria, S.L.		160	52	Soluciones y Desarrollos de Ingeniería		92	60	<b>Thailand</b>	<b>65</b>	<b>547</b>	<b>445</b>
Formacion de Rescate Profesional	882	585	379	TESICNOR SL	1005	1595	824	3M Thailand Limited		40	94
FORMA-T	1645	2458	2292	TGM FORMACION-TRANSGRUMA	86	63	106	Dacon Inspection Technologies Company	45	101	228
GE Wind Energy Albacete		74	76	Tindai Prevención y Seguridad SLL	584	273	298	Pattaya International Safety Training Center	20	406	123
GE Wind Energy Calahorra	1	156	145	Total Health Safety Enviroment SL	233	295	753	<b>Turkey</b>	<b>2466</b>	<b>1778</b>	<b>2395</b>
GRAVITAT, S.L.		16	38	Total Health Safety Environment SL - Sevilla		29	24	Avrasya Rüzgar teknoloji mühendislik	172	181	151

	2018	2019	2020
Ekstrem İşler	220	453	531
ERA İple Erişim Eğitim Danışmanlık	213	160	207
INTERCON İple Erişim ve Eğitim Hizmetl.		126	179
Kaya Training	88	4	97
Mira Endüstriyel Eğitim Danışmanlık	1727	389	401
More Enerji San ve Tic Ltd Şti	46	251	255
OWLAQ Eğitim Danışmanlık A.Ş.		25	43
RÜZGAR AKADEMİ		189	531
<b>United Kingdom</b>	<b>16442</b>	<b>22626</b>	<b>17033</b>
360 Safety & Training		56	176
3sun Academy	240	452	94
Access Rescue Consulting at Height Ltd	655	1010	767
Advanced Blade Repair Services			406
Advanced Industrial Solutions	3167	4465	3851
Ainscough Crane Hire Ltd.	103	228	94
Altitec Academy		9	29
Arco Professional Safety Services	18	6	1
Ayrshire College		18	
Belay Rope Access Ltd.	466	675	496
Boston Energy Limited		7	106
Capital Safety Group (Northern Europe) Ltd	534	339	316
Checkmate Lifting & Safety Ltd	167	304	139
Clyde Training Solutions	7	366	56
Complete Training Solutions	2036	2823	2170
CWind Training	407	573	129

	2018	2019	2020
Dumfries and Galloway College			20
Fleetwood Offshore Survival Centre	277	466	181
HFR Solutions CIC	249	215	276
HTL GROUP LTD	9	22	
Humberside Offshore Training Association	286	592	282
Maersk Training UK Limited	1960	1230	335
Maersk Training UK Ltd	891	1482	2201
Martin Castle Ltd		96	114
Mistras Group Ltd	51	54	
MRS TRAINING AND RESCUE			4
MRS Training and Rescue Ltd	168	198	75
NRS Training Services Ltd		166	327
Offshore Painting Services Ltd	659	1653	1275
Petans	292	450	378
Petrofac Facilities Management	1	2	
Prontoport Ltd	293	54	
RelyOn Nutec	760	668	622
RelyOn Nutec Aberdeen			30
Renewable Strategy Ltd	9		
Rig Systems Limited		31	67
Safer at Work Limited	120	93	36
Safety Technology Ltd	80		
Safety Technology Ltd - UK - Raglan	321	220	181
Siemens Gamesa Renewable Energy	279	1092	413
Taskmasters (UK) Limited	79	338	225

	2018	2019	2020
TEST TRAINING PROVIDER	1	1	
The heightec Group Limited	1076	991	647
The TTE Technical Training Group		12	
Trauma and Resuscitation Services Ltd		140	194
Windhoist Ltd.	781	1029	320
<b>United States of America</b>	<b>2134</b>	<b>3037</b>	<b>4502</b>
ALIMAK Group USA Inc.		17	
ENSA North America Inc.	215	437	1448
High Plains Technology Center	452	1093	1692
Safety Technology - USA	377	48	76
Safety Technology USA		427	363
Safety Technology USA			23
Siemens Orlando Wind Service Training	1090	1015	900
<b>Uruguay</b>	<b>646</b>	<b>457</b>	<b>341</b>
Bonelco S.A.	353	253	127
VG formación	203	130	12
WEIR YES URUGUAY - Ynfiniti	90	74	202





#### About GWO

Global Wind Organisation is a non-profit body founded by leading wind turbine manufacturers and operators, to create a safer and more productive workforce.

GWO members strive for an injury free work environment in the wind turbine industry, setting common international standards for safety training and emergency procedures.

Find out more

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[www.globalwindsafety.org](http://www.globalwindsafety.org)

Photos: Global Wind Organisation



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