SYMET-14: Education and Training in a Period of Rapid Change  
 WMO Symposium on Education and Training   
**Work Plan Template #6**

**Theme #6: Supporting the lifecycle of professionals: From the decision to enter the discipline, to continuous learning, to maintaining job satisfaction and competency. (Chair, Dr. Winifred Jordaan, SAWS members Karam Essaouini, Larisa Nikitina)**

**Background to the theme:**

* New qualified professionals are often lacking to fill positions in NMHSs and related services. New talent needs to be encouraged to study in the requisite areas.
* Due to rapid changes in both operational and research practices, suitable and flexible access to ongoing professional development is critical.
* Qualified and experienced professionals in NMHSs sometimes leave their positions to take other jobs, such as in the private sector. NMHS jobs need to remain attractive and competitive.

**Discussions:**

**Entry into the NMHSs.**

The requirements of mathematics and science does limit the people that can come into meteorology. To make the decision more difficult, these subjects are the same requirements of doctors and engineers. In French speaking countries the meteorologist are called engineers and might actually alleviate the problem.

**Recruitment strategies**

Suggest funding on university level to attract entry into meteorology. Also, information drives to make the career of meteorology known to school children. Promotion of meteorologist. Social networks

**Flexibility around entry level.**

With intake, mentorship is needed for the growth of the new intake to become a useful members of staff. Further studies are also encouraged.

**Retention strategies**

The people in the discussion were more from the pure Public Service. To move forward only administrative promotions are available. Experts then move more into administration. Need a parallel career option. One is administration/ management and one is for scientists. Need a dual career options due to the lack of promotions.

Give forecasters more freedom to expand on their career/give them time to study (training courses)/ research in their expertise. Need to formalize the training or development of forecasters. Need time to do so.

Move to an agency, not a public entity.

One Suggestion is to use Social science – how to communicate/ present/ consultant. Different languages skills might be a problem that need to be looked at and addressed.

Need motivations and progress of the people. Motivation is not only money/salary. Encouragement can include opportunities, like training, outreach to public, soft skill building, international connections.

Access to tools of the trade can build consortium with other countries and that give motivation and encouragement. Meet a lot of people and meteorologists from around the world. Praise and acknowledgement.

For modelers etc.it give satisfaction to know that their output (Regional model) is dispatch to other countries. Forecaster output can save lives and property.

Obs personnel. Changed to electronic stations. Motivation with training. The profession is not growing in Russia. Younger people are not joining.

From Karam

There is a need for big incentives to keep our talented forecasters within SMNH and precisely within the forecast department, for example :

- Organizing an annual regional forecasters forum (the same as workshops and fora organized for researchers) to promote the job and make senior forecasters to stay within their job for a longer time (reward by instituting a regional price for senior forecaster of the year like what’s done for “young researchers”, “vaïsala price” …).

- Largely promote International events dedicated only for forecasters (with special incentive at the country level for their participants).

- Institute a “WMO forecaster certificate” based on criteria well defined (like what is done with WMO centennial observing stations!!)

- Promote nomination in executive/leader positions from senior forecaster employees as well within the SMNH and in a large scope build also a bridge between forecaster pathway and administrative pathway for promotion intra-organization.

- Give forecasters/experts more flexibility in their workday and let them experience and try their hands at a variety of roles in the SMNH to help them consider the growth within the SMHN.

**Goals/Desired Outcomes**

**Challenges to address**

1. Entry into Meteorology: The requirements of mathematics and science does limit the people that can come into meteorology. To make the decision more difficult, these subjects are the same requirements of doctors and engineers. (In French speaking countries the meteorologist are called engineers and might actually alleviate the problem)
2. The training of entry level meteorologists (including forecasters) are critical so that they can function into the job
3. The retention of experienced meteorologists is now becoming critical – especially with the great resignation that is happening after the covid experience where people realized more what they want out of their jobs.

**Barriers to action**

1. In certain counties there are a shortage of learners that qualify with the mathematics and physical science required from meteorology.
2. If there are no guidance given for entry level meteorologists, they will become frustrated and leave.
3. Most of the time money is not available for the retention of the experienced scientists/forecasters and other options needs to be investigated. This is very true in the COVID epidemic due to funding/commercial revenue shortcomings

**Recommended Actions**

*For the attraction to meteorology:*

1. *Own and WMO publications on the importance and attractiveness of careers in meteorology and related disciplines are promoted, but this needs to be expanded to include documentation that is used on social networks as this is the medium new recruits use the most..*
2. *Funding opportunities to study meteorology are suggested in countries where Universities charge for training. The funding is linked to work that needs to be done to pay back the funding. These opportunities are usually advertised on special forums but social networks can also be used.*

*For entry level Professional development*

1. *Mentorship will be critical for development of new personnel within a NMHS as this will settle the new recruit and get faster growths and results .*
2. *Formal further development should be encouraged.*

*For Retention strategies in the general lack of monetary funds*

* *NMHS staff members needs to be appropriately rewarded and recognized for their contributions.*

1. *In the absence of growth due to administrative policies, it is suggested to look at dual career options (the administrative and the scientific career options that are equitable for each group) and policies to ensure that the scientific personnel are looked after.*
2. *Ample Professional Development options needs to be explored like funded part time studies (with the time allocated to the studies), targeted short courses, conferences, symposiums etc. this can include alternative and affordable pathways to education, such as credit-sharing and collaborative degree programmes.*
3. *Investigate opportunities to change policy to enhance careers like full public service to entities etc. so that the retention of staff can be become an option.*
4. *Enhancement of careers that include exposure either publicly or professionally, i.e. consultancy work or international exposure on working groups, etc.*
5. *Enhancement of scientific opportunities like expansion of instrumentation or computers equipment, etc. enhanced tool of the trade.*