

Thank you for sending your message to Environment Canada. I understand your frustration about the lack of accuracy of the forecasts and warnings and wish to explain some of the limitations that we face in making and communicating predictions about the weather.

Although our meteorologists use some of the best radar, satellite and computer model technologies available, there remain deficiencies in our knowledge of the science of meteorology and the past and present weather conditions upon which our meteorologists and computer systems rely in preparing and distributing forecasts.

One big challenge is trying to take into account all the "local effects" caused by the geography of an area where the weather can be substantially different in one place compared to the rest of the region because of the effects of valleys, hills, mountains, or proximity to water. Another is the brevity with which we have to communicate information about often complex weather situations. The accuracy of the forecast is usually better for the near-future, and decreases in the long term as errors associated with the deficiencies in our knowledge of the detailed state of the atmosphere grow over time.

We take the tracking of our forecast performance very seriously and monitor the accuracy of the weather forecasts. Although we are able to see that our predictions have been improving over time, there are occasions where nature sometimes deals us a scenario that is extremely difficult to forecast with the kind of accuracy that we would like and perhaps you expect. We are undertaking efforts to continuously improve our forecasts and to improve our measurements of their accuracy. Rest assured that the technologies are improving and the global knowledge of meteorology is improving with every event that is investigated.

All the complaints we receive regarding the quality of our forecasts and warnings are sent to the appropriate managers of the forecast centres for their information.

Best regards,

Bernard Duguay  
Meteorological Inquiry Specialist  
MSC National Inquiry Response Team ISO 9001:2008  
Environment Canada