

# Monitoring Coastal and Estuarine Water Quality Using Remote Sensing and In Situ Data

## **Installation of SeaDAS**

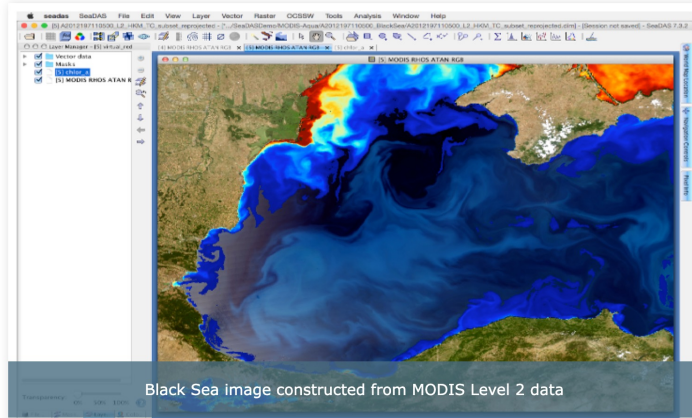
# About SeaDAS

<https://seadas.gsfc.nasa.gov/>

- First, register as a user on NASA Earthdata (if you don't already have an account):  
<https://urs.earthdata.nasa.gov/users/new>
- Visit the SeaDAS page for details about the software:  
<https://seadas.gsfc.nasa.gov/about/>

**The Official NASA/OB.DAAC Data Analysis Software**

Last update: Jun 2021



Black Sea image constructed from MODIS Level 2 data

**Features**

- Visualization
- Science Processing
- Statistics

**Requirements**

**Operating Systems**

- **Linux:** tested on Ubuntu (16.04 LTS)
- **Intel Mac:** OS X 10.12

View the [complete list](#) of suggested hardware & configuration requirements for supported systems.



# System Requirements for SeaDAS

- SeaDAS can be installed on Mac OS, Windows, and Linux operating systems.
- Review system [Configuration and Requirements](#) for SeaDAS installation.

### SeaDAS Configuration and Requirements

SeaDAS is currently available for Linux, Mac OS X, and Windows. For using science data processing code in Windows, see [SeaDAS-OCSSW Client Server](#) page for configuration options. The [SeaDAS source code](#) is publicly available.

**Minimum Suggested Hardware:**

Platforms	Linux Intel Mac OS X
Memory	256 MB minimum, 1 GB+ suggested
Disk:	SeaDAS software package (Display only version): ~200 MB SeaDAS software package (with processing capabilities for all sensors): ~5GB 10GB of free space is also suggested for rudimentary data processing and storage.
Display:	15" Console or X-terminal with 20MB memory 1280x1024 resolution 24-bit X display plane depth 256 colors display minimum

**System Requirements:**

The core visualization package of SeaDAS is written in Java. A minimum Java JRE of version 1.8 is required. A suitable JRE is packaged with the Windows and MacOSX distributions. Linux users will need to separately install a suitable JRE.

**Operating Systems:** **Linux:** tested on Ubuntu (16.04 LTS, 20.04 LTS), CentOS 7 **Intel Mac:** OS X 10.15

**Optional Compilers:** gcc/g++/gfortran (version 5 or higher)

Program	Version	Notes
Java	JRE 1.8	Windows and MacOSX distributions come with a suitable JRE Linux users will need to separately install a suitable JRE
Bash	4.x	necessary only for science code, version 3.x should work, but not tested
Python	3.6 or above	necessary only for science code, <a href="#">Requests library</a> (2.18.0 or greater) must also be installed

**Authentication Requirement:**

The requirement for Earthdata Login authentication for data downloads caused issues for the SeaDAS python scripts that are used for retrieving ancillary data. These scripts have now been updated to work with authentication using the Requests Library.

The authentication requires a .netrc file as described on the [Search and Download Methods](#) page.

Responsible NASA Official: Gene C. Feldman  
Curator: OceanColor Webmaster  
Authorized by: Gene C. Feldman

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# Find SeaDAS Version 8.1.0

<https://seadas.gsfc.nasa.gov/>

- Go to:  
<https://seadas.gsfc.nasa.gov>
- At the bottom left of the page, click **Download**

**The Official NASA/OB.DAAC Data Analysis Software**

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Black Sea image constructed from MODIS Level 2 data

SeaDAS is a comprehensive software package for the processing, display, analysis, and quality control of ocean color data. While the primary focus of SeaDAS is ocean color data, it is applicable to many satellite-based earth science data analyses. Originally developed to support the SeaWiFS mission, it now supports most U.S. and international ocean color missions.

The SeaDAS 8.x platform (an extension of the ESA SNAP platform) serves as an application platform to the NASA SeaDAS Toolbox and the ESA Sentinel-3 Toolbox. The core elements of NASA SeaDAS science processing (both command line and GUI-based) are contained within the SeaDAS Toolbox. The NASA satellite mission data file readers and the ESA processors for the Sentinel-3 missions are contained within the Sentinel-3 Toolbox. SeaDAS 8.x is a significant modification over SeaDAS 7.5.3 regarding the core components and inner framework of the GUI.

The latest version of SeaDAS is 8.1.0, which contains SeaDAS Toolbox (version 1.1.0) and Sentinel-3 Toolbox (version 8.0.3).

[Download](#)

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# Download SeaDAS

<https://seadas.gsfc.nasa.gov/download/>

User authentication is [required](#) before data downloads are permitted.

Before downloading, please review our [license](#).

To learn about the latest changes to the software, please see our [announcement](#) of SeaDAS 8.1.0 release.

## SeaDAS Installers and Source Code

### Visualization Installers

Filename	Version	Size
<a href="#">seadas_8.1.0_windows64_installer.exe</a>	8.1.0	487 MB
<a href="#">seadas_8.1.0_mac_installer.sh</a>	8.1.0	608 MB
<a href="#">seadas_8.1.0_linux64_installer.sh</a>	8.1.0	630 MB

In some browsers you may need to right click on the appropriate link and choose "Save Link As" to download the installer.

To install and run SeaDAS, follow the instructions on [this page](#).

- Click on appropriate **Mac OS or Windows operating system** file for your computer and save the file
- We will be using the Graphical User Interface (GUI) **on either Windows or Mac OS, not Linux command line version**
- Review the **page** for installation instructions



# Install SeaDAS on Mac OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

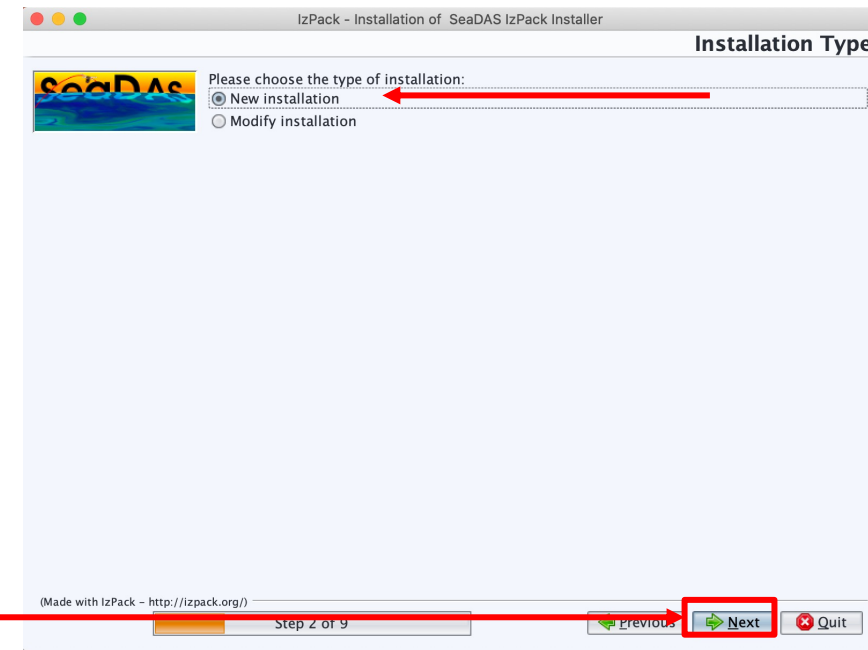
- Download the Mac installer file **seadas\_8.1.0\_mac\_installer.sh**
- The Mac installer is a shell script
- It can be executed in a terminal window with the following command line statement typed in the terminal window:  
**\$ sh seadas\_8.1.0\_mac\_installer.sh**
- An installer window will launch
- Follow the instructions to complete the installation steps 1 to 9
- Click **Next**



# Install SeaDAS on Mac OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

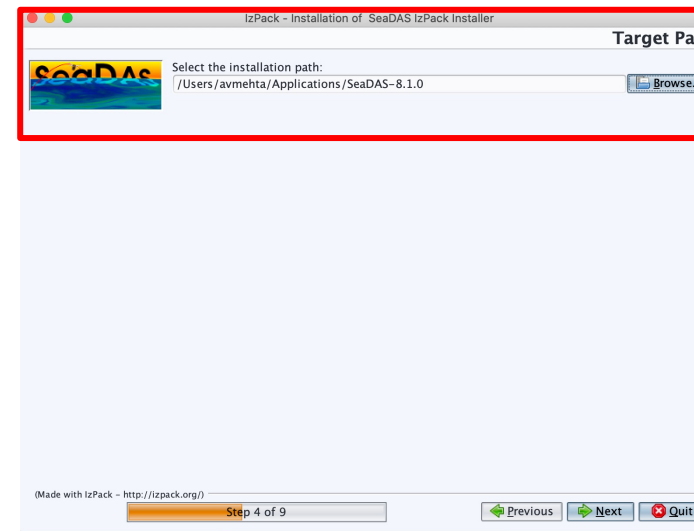
- Select **New Installation** and click **Next**



# Install SeaDAS on Mac OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

- The **Licensing Agreement** window will open
- Select the **terms of this license agreement** and click **Next**
- In the **Target Path** window → **Select the installation path**: enter the directory path and name to install SeaDAS and click **Next**

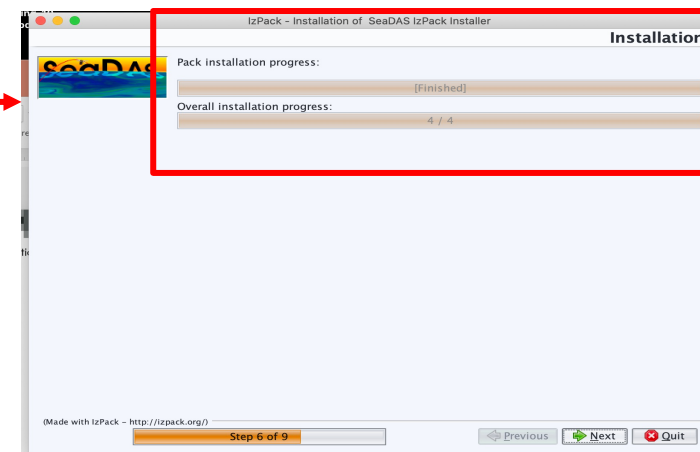
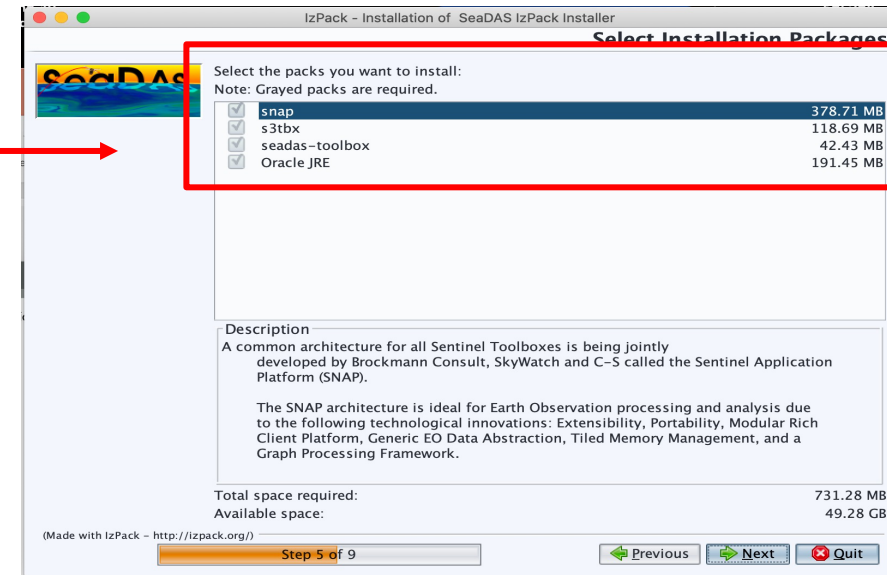




# Install SeaDAS on Mac OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

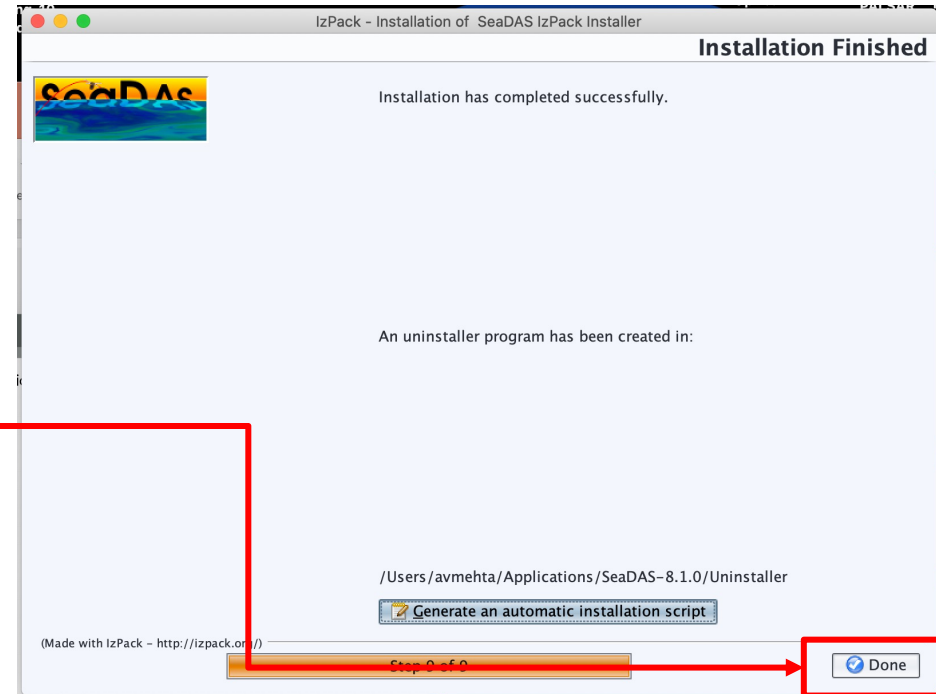
- In the **Select Installation Packages** window, keep the default packages and click **Next**
- The installation will start and will show **Pack installation progress** and **Overall installation progress**. Click **Next**



# Install SeaDAS on Mac OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

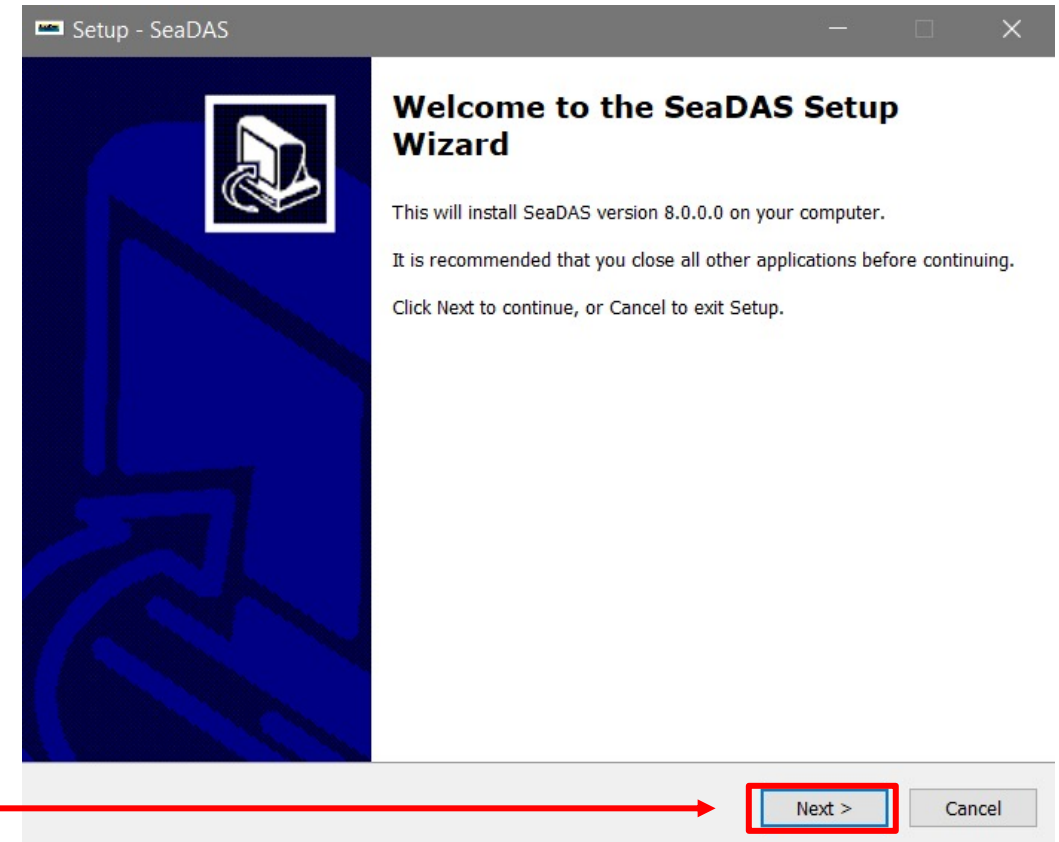
- Click **Next** on each window until you reach the **Installation Finished** window and click **Done**



# Install SeaDAS on Windows OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

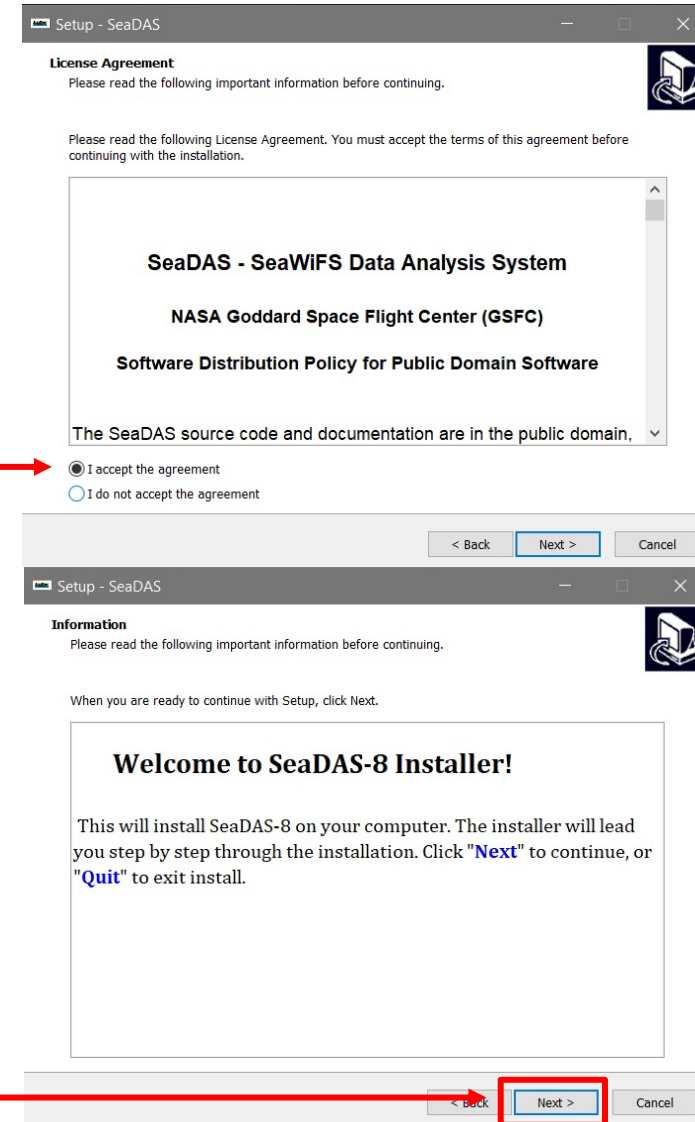
- Download the Windows installer file **seadas\_8.1.0\_windows\_installer.exe**
- Navigate to the downloaded file location and double-click on the installer icon
- Once the installer window launches, follow the prompted instructions
- Click **Next**



# Install SeaDAS on Windows OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

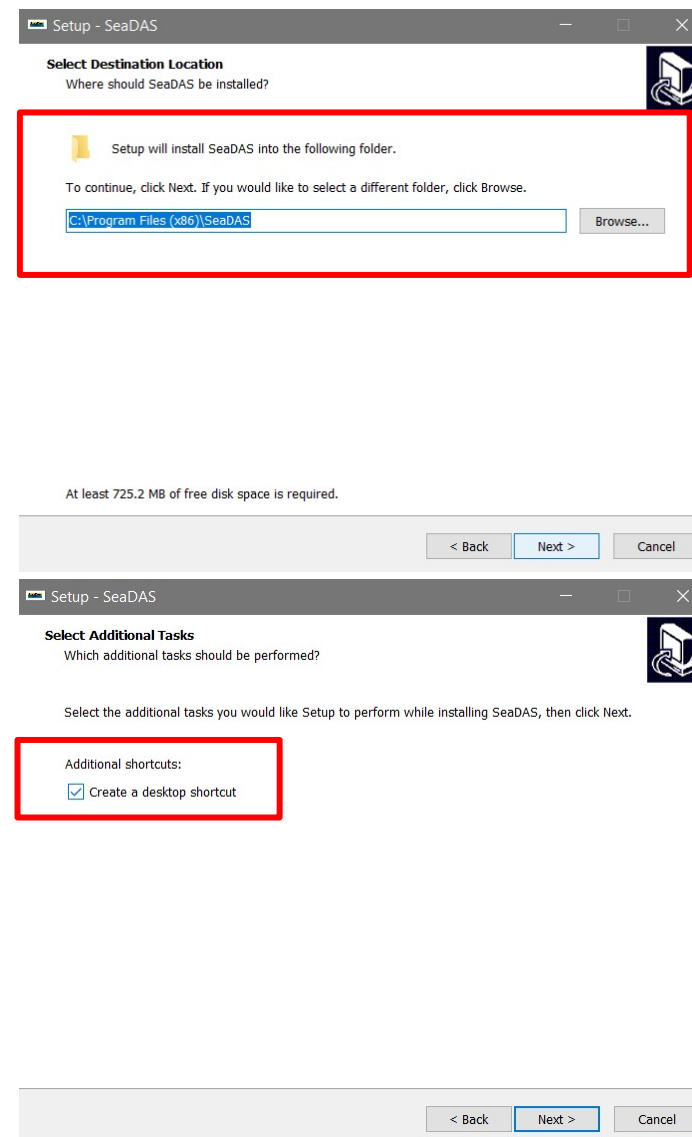
- The **Licensing Agreement** window will open
- Select **the terms of this license agreement** and click **Next**
- In the **Information** window, select **Next** to continue



# Install SeaDAS on Windows OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

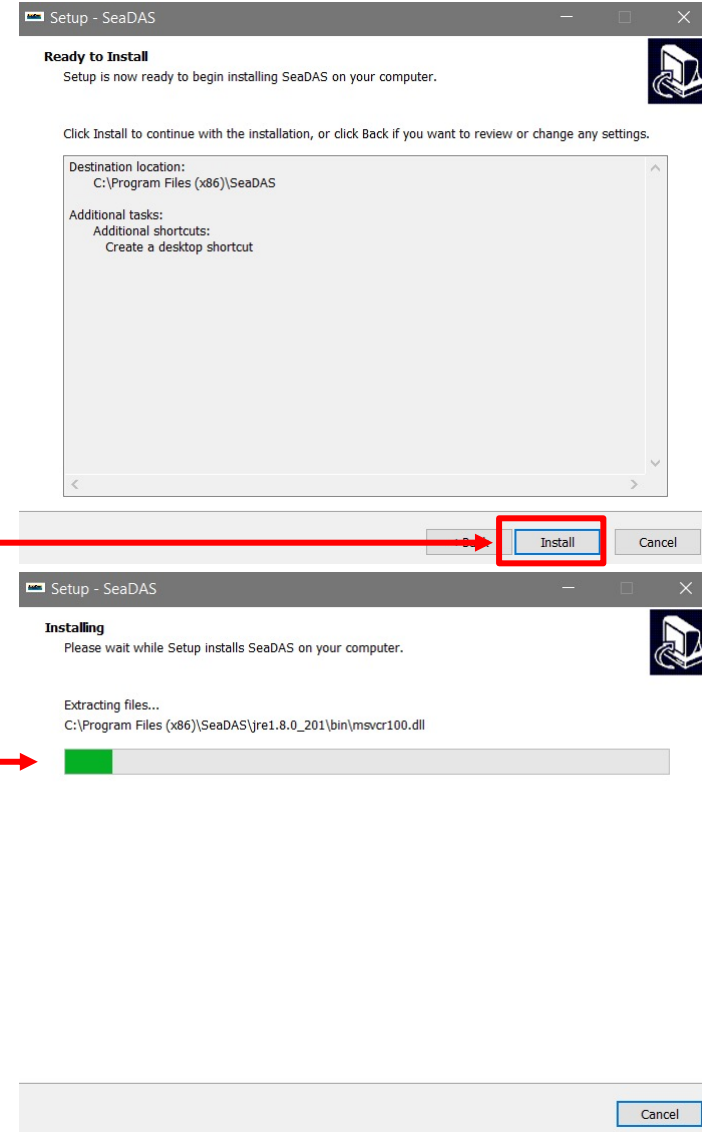
- In the **Select Destination Location** window → **Select the installation path:** enter the directory path and name to install SeaDAS and click **Next**
- Check the box next to “**Create a Desktop Shortcut.**” The installer will create a desktop icon for launching the SeaDAS application



# Install SeaDAS on Windows OS

<https://github.com/seadas/seadas-toolbox/wiki/SeaDAS-8.x-Download,-Installation-and-Run-Instructions>

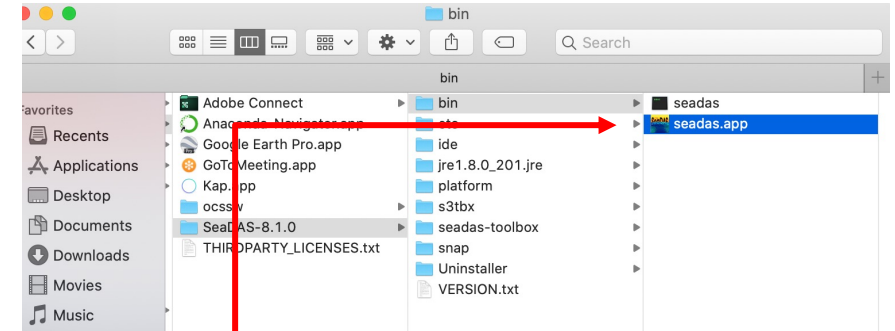
- Confirm installation of SeaDAS by clicking **Install** in the “**Ready to Install**” Window
- The application will begin installing



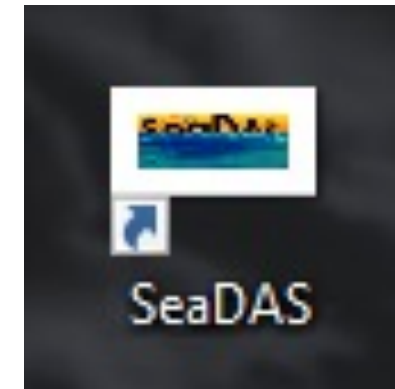
# Open the SeaDAS GUI

Navigate to the directory where SeaDAS is installed on your computer:

- On a **Mac** computer, for example, go to:
  - /Applications/SeaDAS-8.1.0/bin
  - Click on seadas.app to open the SeaDAS Interface



Or launch the application by double-clicking the desktop shortcut in **Windows**:



# Open the SeaDAS GUI

- When the SeaDAS GUI opens, it will have a **SeaDAS Question window** asking to check for new version availability
- Click **Remember my decision and don't ask again** and select **No**

