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**Standard and Procedures ADS-I Scientific Diving 2021**

1. **General Objective**

The level of Scientific Diving Certifications is designed by Association of Diving School – International (ADS-I) Indonesia as a standard and procedure for Open Water Diver and above who want to be a Scientific Diver, and have a college background. The scope of the activities is mainly for underwater studies.

The competence that they must have is to carry and install underwater equipment, observe, record and photograph the conditions of the underwater ecosystem precisely, accurately and safely. In the activities planning, they still need the guidance and supervision from the Director for ADS-I Scientific Diving Indonesia Program.

The levels are:

1. **Basic Scientific Diver**, with selected competencies:

a. Rapid Reef Assessment (RRA)

b. Seagrass Assessment (SA)

2. **Intermediate Scientific Diver**, with selected competencies:

a. Mega benthos Assessment (MA)

b. Reef Condition Assessment (RCA)

c. Reef Fish Assessment (RFA)

3. **Advanced Scientific Diver**, with selected competencies:

a. Reef Health Monitoring (RHM)

b. Reef Fish Identification (RFI)

c. Artificial Reef Assessment (ARA)

d. SPAG's & Megafauna Monitoring (SMM)

e. Oceanographic Tool Installation (OTI)

1. **Standards and Procedures**

1. ADS-I Scientific Diver is an Open Water Diver and above, who has graduated from college with at least Diploma-1 (D1) or undergraduate student who still in the 3rd Semester.

2. The prerequisites for the log before participating the training:

1. Basic Scientific Diver: 4 logs,
2. Intermediate Scientific Diver: 10 logs,
3. Advanced Scientific Diver: 20 logs.

3. Training until certification is about 10 – 18 hours with the following learning compositions:

a. **Basic Scientific Diver** (10 Hours):

• 3 hours for Academic Class Session

• 3 hours for Confined Water Session

• 4 hours for Open Water Session

b. **Intermediate Scientific Diver** (14 Hours):

• 4 hours for Academic Class Session

• 4 hours for Confined Water Session

• 6 hours for Open Water Session

c. **Advanced Scientific Diver** (18 Hours):

• 5 hours for Academic Class Session

• 5 hours for Confined Water Session

• 8 hours for Open Water Session

4. The training and certification will be conducted by ADS-I Scientific Diver Instructors. The Director of this Program will supervise and receive the training reports, and give the certificate.

**III. Training and Certification Procedures**

1. Fill in the student application form & send a file of color photograph.
2. Fill out and sign a statement/agreement form regarding the risks during the training.
3. Fill out and complete the form about the condition and medical history, and if necessary, accompanied by medical certificate.
4. All documents will be sent to ADS-I Indonesia Headquarters in Denpasar - Bali through the Director of ADS-I Scientific Diving Indonesia Program, and it will be forwarded to the ADS-I Headquarters in Yokohama – Japan.
5. Approximately 2 weeks later, the issued certificates will be sent to the Director or the Instructors then continued to the students.
6. The certificate is valid for 4 (four) years and for the renewal, the diver should contact to the ADS-I Scientific Diver Instructors and it will be continued to the ADS-I Indonesia Headquarters in Denpasar - Bali
7. **Skill Objectives**
8. **Basic Scientific Diver**: 10 hours

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| 1. **Academic and Underwater Act. Method** |  |
| 1. Planning and Organizing Scientific Diving (*Dive Plan Proposal*) | 1 hour |
| 1. Shallow Water General Assessment (Select a method) | 2 hours |
| 1. Manta Tow Method |  |
| 1. Sea Grass Assessment and Monitoring Method |  |
| 1. Time Swim Method |  |
| Total | 3 hours |

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| 1. **Confined Water** |  |
| 1. Navigation Skill | 1 hour |
| 1. Fin Swimming Skill | 1 hour |
| 1. Hand Signal and Basic Rescue Skill | 1 hour |
| Total | 3 hours |

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| 1. **Open Water (Select in a Competency)** |  |
| 1. Manta Tow Technique | 4 hours |
| 1. Sea Grass Assessment and Monitoring Method | 4 hours |
| 1. Time Swim | 4 hours |
| Total | 4 hours |

1. **Intermediate Scientific Diver**: 14 hours

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| 1. **Academic and Underwater Act. Method** |  |
| 1. Planning and Organizing Scientific Diving (*Dive Plan Proposal*) | 1 hour |
| * Reef Condition Survey (Select a method) | 3 hours |
| 1. Point Intercept Transect (PIT) Method |  |
| 1. Reef Fish Visual Census Method |  |
| 1. Mega benthos Assessment Method |  |
| Total | 1. hours |

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| 1. **Confined Water** |  |
| 1. Neutral Buoyancy | 3 hours |
| 1. Rescue Skill | 1 hour |
| Total | 1. hours |

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| 1. **Open Water (Select in a Competency)** |  |
| 1. Point Intercept Transect (PIT) | 6 hours |
| 1. Reef Fish Visual Census | 6 hours |
| 1. Mega benthos Assessment Method | 6 hours |
| Total | 6 hours |

1. **Advanced Scientific Diver**: 18 hours

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| 1. **Academic and Underwater Act. Method** |  |
| 1. Planning and Organizing Scientific Diving (*Dive Plan Proposal*) | 1 hour |
| 1. Survey in Advanced Reef Condition (Select a method) | 4 hours |
| * 1. Underwater Photo Transect   2. Artificial Reef Assessment Method |  |
| * 1. Oceanographic Tools Installation |  |
| * 1. Reef Fish Identification |  |
| * 1. SPAG’s & Megafauna Monitoring |  |
| Total | 1. hours |

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| 1. **Confined Water** |  |
| 1. Proper diving Trim | 2 hours |
| 1. Underwater Video/Photography skill | 2 hours |
| 1. Advance Rescue Skill | 1 hour |
| Total | 1. hours |

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| 1. **Open Water (Select in a Competency)** |  |
| 1. Underwater Photo Transect (UPT) | 8 hours |
| 1. Artificial Reef Assessment Method | 8 hours |
| 1. Reef Fish Identification | 8 hours |
| 1. SPAG’s & Megafauna Monitoring | 8 hours |
| 1. Oceanographic Tools Installation | 8 hours |
| Total | 1. 8 hours |

1. **Supporting Materials**

Skill Content:

ADS International Instructor Manual Text Book

ADS International Scientific Diver Manual

ADS International Student Application Form

ADS International Dive Table